AN ENQUIRY

INTO THE

TRUTH and CERTAINTY

OF THE

MOSAIC DELUGE,

WHEREIN

The Arguments of the Learned *Isaac Vossius*, and others, for a TOPICAL DELUGE are examined;

AND

Some Vulgar Errors, relating to that GRAND CATASTROPHE, are discover'd.

By *PATRICK COCKBURN*, M. A.
VICAR *of* Long-Horsley, *in* Northumberland.

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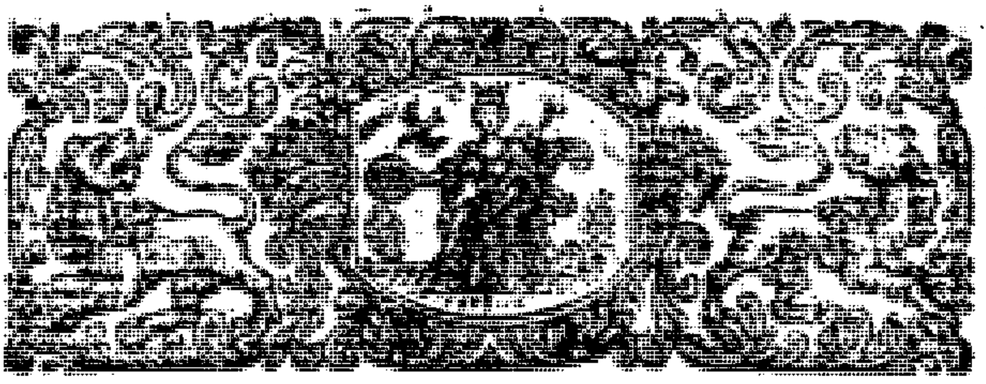

AN

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TRUTH *and* CERTAINTY

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BOOK I.

INTRODUCTION.

EVENTS out of the ordinary course of Nature, and which very rarely happen, find little credit with many, how well soever attested they come transmitted to posterity. Persons unacquainted with the Planetary motions, or who had never seen nor perhaps heard of a *total* Eclipse of the Sun, would hardly be persuaded that such a thing was possible, that when the Sun shone in its strength, it could be wholly obscured, and the Earth covered with darkness. Before the last total Eclipse of the Sun in the year 1715, which was

very

very visible at *London*, there were many fine Gentlemen there, who laughed at it as a thing ridiculous, and not to be believed, though several *Schemes* of it had been published, and it had become the common topic of conversation for some time before.

Among those rare and extraordinary Events that have happened in the *natural* world, none appears more wonderful and astonishing than the Flood of *Noah*, said to have overflowed the whole Earth to a very great height of waters; and yet there are things that happen every day, that are far more wonderful than that of the Deluge.-----That a vast and ponderous body of *inert* matter (such as this Earth we inhabit is) should once in twenty-four hours revolve upon its *Axis*, and besides make an annual Orbit round the Sun with incredible * velocity, is surely a greater and more amazing prodigy than an universal Deluge over the Earth: And if the Flood of *Noah* is in any respect wonderful, this of the diurnal rotation and Orbit of the Earth is much more so. This last we believe, because we are daily sensible of its effects in the regular vicissitude of day and night, and in the variety of seasons; but the other we give little credit to, because it happened but once, and that some thousand years ago; as if what happened four or five thousand years ago, could not be as certain, undoubted matter of fact, as what fell out last year. What was once *certain* fact, must continue such to all ages.

That there was a Deluge in the days of *Noah*, seems a point undisputed, being acknowledged on

* Captain *Halley*, in his Observation of *Mercury* in the Sun at St. *Helena*, in the year 1677, tells us, that the *annual* motion of the Earth is so exceeding swift, as far to exceed that of a bullet shot out of a cannon, and to be after the rate of three *English* miles and a half in a *second*, which is 210 miles in a *minute*, and 12,600 miles in an *hour*.

all

all hands; but that this Deluge was *universal* in extent, has been doubted by some, and denied by others. Some men of great name in the Republic of *Letters*, have judged it to have been only *topical*, or particular to some one part of the Earth; partly to avoid the many difficulties, with which they thought an *Universal* Deluge was incumbered, and partly because they judged such a Deluge altogether unnecessary; since, according to them, mankind had spread but a little way upon the Earth when it happened. We shall first, therefore, bring their Schemes of a partial Deluge to the *Test*, and examine them by reason, to which if they appear agreeable, our Enquiry will soon be at an end. But if they are found to be inconsistent with reason, and involved in absurdities, we must then proceed in our search, and enquire whether there be not sufficient reasons to believe the Flood of *Noah* to have been *universal* over all the Earth.

To alledge the Divine authority of *Moses* in point of evidence here, would be to no purpose; not only because it would be of no force with those who acknowledge not that authority; but, even of those who do, some have nevertheless asserted the Deluge to have been only *partial*. In this Enquiry, therefore, we shall consider the character of *Moses* only as an historian. Not to pay the same regard to *Moses* as we do to *Greek* or *Roman* historians, would be contrary to both reason and justice.

This Enquiry will necessarily oblige us to treat of some subjects *seemingly* distant from the main question: It will likewise engage us to search into some of the manners and customs of those early ages, in which, it must be confessed, we have but small light to guide us, there being so little recorded of those ancient times. With respect to these things, objections indeed may be started, which, at this great distance of time, it may be difficult or not possible

to anſwer, for want of fuller accounts of that infant ſtate of the world. All that the candid reader can expect in ſuch matters is probable reaſons, where no certainty on one ſide or other can be pretended.

According to our propoſed method, we ſhall firſt lay before the reader ſome *Schemes* of a *partial* Deluge, beginning with thoſe of the learned *Iſaac Voſſius*, and Mr. *Coetlogon*.

CHAP. I.

Sect. I. *Containing two of the Schemes of a partial Deluge, from the learned* Iſaac Voſſius, *and Mr.* Coetlogon.

" THERE is no manner of doubt, therefore,
" (ſaith *Voſſius**) that there was but one Flood,
" and that *univerſal*; the memory of which is ſtill
" retained in almoſt all nations. Nevertheleſs I
" cannot approve the opinion of thoſe, who think
" the whole face of the Earth to have been ſo co-
" vered with waters, that no part of it was ex-
" empted from them. To effect this, many mira-
" cles muſt have concurred. For ſince the waters
" of the whole Globe would not ſuffice to over-

* Nullum igitur relinquitur dubium, quin unum tantum fuerit diluvium, idque Univerſale; cujus apud omnes pene gentes extat memoria. Verum hic minimè eorum probo ſententiam, qui totum terræ globum ita aquis tectum fuiſſe ut nulla prorſus ejus extaret portio. Ad hoc efficiendum multa debent occurrere miracula. Cum enim Univerſi Orbis aquæ ad obruendam tam alte terram, etiamſi omnia maria ſiccentur, &c. *Voſſius de vera ætate Mundi*, p. 283, & ſeq.

Note, The pages here are marked from the ſecond Edition of that Treatiſe, joined to his Diſſertation *de Septuaginta Interpretibus*, printed at the *Hague* 1661.

" flow

" flow the Earth to such a height as is mentioned, " although all the Seas were drained, more waters " must either have been created for that purpose, " or we must say with some, that That vast quan- " tity of water fell down from some or other of the " celestial Orbs, and, the Deluge ended, returned " back again to their former place. But these are " only pious fooleries. God works no miracles in " vain. What need was there to drown those lands " where no men lived, or are yet to be found? " 'Tis a foolish thing to think mankind to have " multiplied so much before the Flood, as to have " overspread all the Earth. How slow and sluggish " the first men were in propagating their kind, is " evident from hence, that *Noah* was but the ninth " in a lineal Descent from *Adam*. Whoever there- " fore will compute rightly, will find, that many " more persons might have descended from those " eight, who escaped the Deluge, to the time of " the *Dispersion* of Nations, than could have pro- " ceeded from *Adam* alone in the Space of two " thousand years; but yet it is certain, that before " the *Dispersion* at *Babylon*, mankind possessed but a " very small part of *Asia*. They are quite wide of " the truth, therefore, who think mankind to have " spread over all the Earth in the days of *Noah*, " who perhaps at that time had not extended them- " selves beyond the borders of *Syria* and *Mesopota-* " *mia*; but no reason obligeth us to extend the " Inundation of the Deluge beyond those bounds " which were inhabited *: Yea, it is altoge- " ther absurd to aver, that the effect of a punish- " ment inflicted on mankind only, should extend " to those places where no men lived. Although

* The learned Author is here under a mistake. A good reason will be found, in the course of this Enquiry, why the Deluge should extend over the whole Earth, tho' it had not been all inhabited by mankind.

" we ſhould therefore believe that part of the Earth
" only to have been overflowed by the waters which
" we have mentioned, and which is not the hun-
" dredth part of the terreſtrial globe, the Deluge
" will nevertheleſs be *univerſal*, *æcumenical*, ſince
" the deſtruction was univerſal, and overwhelmed
" the whole inhabited world. If we conclude this
" to have been the true ſtate of the caſe, then thoſe
" vain and idle queſtions which ſome have moved,
" concerning the Deluge, will fall to the ground of
" themſelves; and likewiſe all occaſion will be
" taken away from Infidels to doubt the truth of
" the Sacred Hiſtory."

Thus far our learned Author in his Treatiſe *of the true Age of the World.* But in his firſt Defence of it, or Animadverſions on his Adverſary *Hornius*, he further adds what follows.

" * But to come to a concluſion; we ingenuouſly
" declare, that we willingly ſubmit what we have
" written about the *Deluge*, as well as other mat-
" ters, to the judgment of learned men, viz.
" *Bochart*, *Dallie*, *Amyrault*, and other Divines,
" thoſe eſpecially who know how to weigh the
" ſtrength of arguments in an equal balance. Let
" them conſider, whether, in order to convince Un-
" believers (whoſe reaſons in this point are ſtronger
" than thoſe of Believers †) it is not expedient to
" believe,

——* Sed terminum tandum aliquando ſtatuamus, illud ingenue profitentes, nos libenter ut cætera, iſta quoque illa quæ de Diluvio diximus, libenter ſubmittere judicio illuſtrium virorum, Bocharti, Dallei, Amyraldi, omniumque adeo Theologorum, ac eorum præſertim qui rationum momenta æqua lance ponderare ſciunt, &c. *Caſtigationes in Hornium*, p. 342, & ſeq. the ſame Edition.

† It would ſeem by this, that an Univerſal Deluge had been but weakly defended before our Author's time; but I can find no ſuch ſtrength of reaſon in either his or the other's objections againſt it. And this Enquiry will, I hope, ſerve to make good an obſervation of a very judicious Divine, *viz.* " That
" no

" believe, that all the Earth, that was inhabited, " was overflowed, but not the *Islands* or uninha- " bited Lands. Divines confess, that they would " willingly embrace this opinion, if it was certain " that the Animals and wild Beasts were no-where " else upon the Earth than where Men inhabited. " But as this is no way probable, since, from the " beginning of the Creation, every Land had its " own Animals, they rather follow the other opi- " nion. But what hinders why we may not under- " stand those words of *Moses*, which signify *all* the " living creatures to have perished by the Flood, " to mean *all of the World that was inhabited.* " Every one knows, that in many places in Scrip- " ture the word *all* is not to be understood strictly " of the whole, but also of any integral part. " Even in the books of the *New Testament*, the " word *all* is often to be taken in this sense; as " where it is said, that the Devil shewed *Christ all* " *the kingdoms of the World* from an high moun- " tain, *Matth.* iv. 8. and where it is said, that by " the Decree of *Cæsar Augustus all the World was to* " *be taxed*, Luke ii. 8.

" Is it not better to think thus, than with *Origen*, " and some ancient *Rabbins*, to extend the measure " of the Ark to an immense magnitude? Accord- " ing to *Moses*, the *Area* of the Ark contained " about four hundred and fifty thousand square " cubits. But according to those *Rabbins* and *Ori-* " *gen*, the *Area* of the Ark would have been four " hundred thousand times as large. This measure " plainly arises from the *Greek* of *Origen*, which " *Ruffinus* has partly omitted, and partly translated

" no man departed from the common faith upon pretence of " avoiding any absurdity therein supposed, but that he ran him- " self upon the necessity of believing greater absurdities than " any he pretended to avoid." *Young's Wisdom of Believing*, p. 53.

" wrong. To multiply miracles needlessly, is, in
" effect, nothing else but to destroy them. If, as
" *Origen* and the *Rabbins* thought, the Ark had been
" ninety thousand cubits in length, two thousand
" five hundred cubits broad, and nine hundred in
" height, (for they extended in length the squares
" of all the sides *) then the contents of the Ark
" had been so immense, that it was not only suffi-
" cient for all the animals of every kind, but could
" easily hold all the men that may be found this
" day upon the face of the Earth, and also food
" sufficient for several years. But to let this pass.--
" This one thing will I add before I conclude, that
" in all ages there have not been wanting those who
" have interpreted this passage of *Moses* as we have
" done. For, to omit the *Jews*, Schoolmen, and
" others, of this opinion was *Theodorus* of *Mop-*
" *suestia* of old, who was followed herein by *Theo-*
" *doret*. And from the *Orthodox Questions* extant
" among the Works of *Justin Martyr*, it may be
" clearly collected, that many Christians of old
" were of this opinion. *Josephus* also clearly shews,
" that not the whole Earth was overflowed, when

* The Square of any number is the product of the *given* number multiplied by the same. Thus the Ark being three hundred cubits in length, that number multiplied by three hundred, the product is ninety thousand. Again, the breadth of it being fifty cubits, that multiplied by fifty, the issue is two thousand five hundred. And the height being thirty, that multiplied by the same, makes nine hundred. Now an Ark of ninety thousand cubits long, two thousand five hundred broad, and nine hundred cubits high, would have been a *monstrous* fabrick indeed. What could induce the Rabbins to enlarge the Ark at this extravagant rate, contrary to the plain and express words of *Moses*, is not easy to conceive. Common sense might have taught them, that it was impossible for *Noah* and his sons to have built an Ark of these dimensions during the whole time of their life. But if *Origen* at first, in a *panic*, gave into these extravagant fooleries of the *Rabbins*, he retracted it afterwards; supposing, with St. *Augustin* and others, that the cubit of the Ark might be a Geometrical cubit; of which in its place.

" he

" he says, εἰς θάλασσαν τὴν ὑπέιρον μετέβαλε *, *he* " *changed the Continent into Sea.* Ἤπειρος the Con- " tinent, is less than οἰκουμένη the World, or habit- " able Earth; for this, *the Earth*, the Ancients " divided into three Continents, as is notorious; " but for the whole globe of the Earth, that word " was never used." Thus he.

Now from these quotations out of *Vossius*, it appears that he embraced this opinion of a *partial* Deluge, partly because he thought mankind to have been but few in number at the time of the Deluge, (a point to be examined hereafter) and partly to avoid those difficulties and objections to which a Deluge, *Universal* in extent, was liable. But difficulties and objections will not justify the rejecting a truth, otherwise sufficiently evident, though we should not be able to give a clear solution to them all, since unanswerable objections may be made to some demonstrable propositions; our knowledge here being limited, and very far short of *Omniscience.* In matters of fact, as this of the *Deluge* is, all the

* This expression in *Josephus* seems rather to imply the contrary to what *Vossius* pretends; for had he meant only one Continent, it was surely very easy for him to have named which of the three. Besides the meaning of the words οἰκουμένη and ἤπειρος, is not so fixed as to be taken always precisely in one determinate sense. Οἰκουμένη was used for *the habitable World*, and also for *the whole extent of the Roman Empire*, which was far from being commensurate to the habitable World. ἡ γῆ *terra* stands for the whole Earth, and also for any part of it; and when ἤπειρος stands opposed to θάλασσα, it signifies simply the Earth, of which see several instances in *Stephani Thesaurus*; and the meaning of *Josephus* is plainly this, that God turned the dry Land into Water. As to the other authors here mentioned, since we have only their opinion, but not their reasons for it, we need not trouble ourselves about them: 'Tis possible they might incline to the notion of a *partial* Deluge, from the objections of their adversaries, which they knew not how to answer; and they are quoted here by *Vossius*, to shew that he was not singular in his opinion, to take off that *odium* to which his asserting a partial Deluge might expose him.

parts

parts and circumſtances muſt equally come into conſideration, that the whole may appear rational, and conſiſtent with itſelf; otherwiſe, to avoid *difficulties* on one hand, we may run upon *abſurdities* on the other, as will appear to be the caſe, by the examination of this and every other Scheme of a *partial* Deluge.

But let us now proceed to another *Scheme* lately given us, and retailed all over the nation, to the great *improvement* no doubt of true learning. Mr. *Coetlogon*, in his *Univerſal Hiſtory of Arts and Sciences*, Article *Antediluvians*, has given us a Scheme of a partial Deluge which he informs us, thoſe perſons are willing to allow, who deny the truth of *Moſes*'s Hiſtory, and it is the following, *viz.* " That the " firſt inhabitants of the Earth being placed at the " confluent of two great rivers, the *Euphrates* and " *Tigris* *, thoſe rivers may have overflowed their " banks all of a ſudden, and ſurprized the neigh- " bouring inhabitants, not yet accuſtomed to ſuch " ſort of viſits, and drowned part of them (and if " really deſigned as a puniſhment) thoſe who were " the more guilty. That ſome of the animals, par- " ticularly the moſt ſlothful, and conſequently not " ſo apprehenſive of danger, or ſo ready to take to " flight to avoid it, might have been involved in " the ſame calamity, as well as ſome of the *Volatiles*; " which being deprived of food by the Earth's be- " ing overflowed, might have periſhed; particu- " larly thoſe who by the too great weakneſs of their " wings to ſupport their bodies were not proper for

* This is taken for granted, without any proof. It is no ways certain, nor any where ſaid, that the Ark was built, or that *Noah* lived between the *Tigris* and *Euphrates*, as is here ſuppoſed.

Here the Reader may obſerve, that the Deluge is firſt made accidental; and by and by, it is made not accidental, ſince *Noah* was admoniſhed to provide againſt it, long before it came.

" a

" a long tract. As for others who had these advan-
" tages above the rest, no doubt they took care of
" their own preservation by flying to those parts of
" the earth, which their natural Instinct could shew
" them free from the Inundation.

" That *Noah* being represented as a just man
" might have been inspired to precaution himself
" against the imminent danger, and have built the
" Ark for that purpose, but that they cannot ima-
" gine he was so long in building it, because we are
" not yet certain what was the year of those times;
" if it consisted of twelve months like ours, if those
" months were of thirty or thirty one days, those
" days of twenty-four hours, those hours of sixty
" minutes, *&c.* or if those years mentioned by *Moses*
" were not rather our months or weeks.

" As for *Noah*'s taking a couple of each kind of
" animals along with him into the Ark, it might
" be attributed rather to his care for the preserva-
" tion and subsistence of his family, than to any de-
" sign in him to preserve the different Species of
" animals; that not knowing perhaps the Earth to
" be of farther extent than that he was acquainted
" with, he thought that without such precaution,
" if the waters were to continue long upon the face
" of the earth, or if they were ever to retire to their
" former beds, he and his family must have pe-
" rished for want, had he not taken with him the
" male and the female, to propagate each species
" of animals sufficiently for *its use* (his or their use
" I suppose it should be) that what would be left of
" those animals, if ever the waters were to retire,
" would suffice perhaps to replace those lost in the
" Inundation."

This is the whole of the *Scheme*, to which he has added some objections against an Universal Deluge, and the content of the Ark, and spun out the Article in Animadversions on Theories long ago con-

futed by Dr. *Keile.* What has the appearance of an Argument will be conſidered as it comes in courſe. But our Author has been a little unlucky in the forming his Hypotheſis: For though his apparent deſign was to frame the Article in favour of the Freethinkers, probably to ingratiate himſelf with the numerous tribe for the better ſale of his book, and for that end to depreciate *Moſes* as much as he could, yet he is compelled to allow ſuch things, as utterly ſubvert the whole Scheme, as will be ſeen in the Sequel.

The Reader may obſerve, that both theſe *Schemes* of the Deluge are built on one and the ſame foundation, viz. *the ſmall number of mankind at the time of the Flood*, whom they both confine to a ſmall part of the Earth; *Voſſius* to *Meſopotamia* and *Syria*, or perhaps a little farther, *Coetlogon* to *Meſopotamia* only; but yet that they differ in a very material point. For whereas *Voſſius* makes the Flood univerſal in its effect, that is, to have utterly deſtroyed all mankind, and all the animals where mankind inhabited, Mr. *C*------ on the contrary, out of his great indulgence, allows both ſome men and animals to have eſcaped the deſtruction. Nay, though in this *Scheme* he would ſeem to confine all mankind between the *Tigris* and *Euphrates*, yet in other parts of the Article, he would inſinuate, as if there had been men in other parts of the world, even no farther than *Egypt*, who knew nothing of the *Deluge*, nor of the Deſcendants of thoſe who had eſcaped it.

I am ſorry to couple authors of ſo great diſparity together, but as they agree in ſome main points, *viz.* the *paucity* of mankind at the Deluge, their inhabiting a ſmall part of the Earth, and the Flood's reaching no farther than the part ſo inhabited; the ſame arguments will ſerve for the confutation of both; though where they differ, they ſhall be con-

ſidered

sidered separately. It will be necessary however to take the Subject from its first source, I mean from the *Divine monition* given to *Noah* of a future Deluge, as it stands in Mr. *Coetlogon*'s Scheme, being a matter of some importance.

SECT. II.

Of the previous Monition given to Noah, *and whether the Deluge was owing merely to a Natural Cause, independent of all moral considerations.*

WE are bound to acknowledge it a great concession in those who reject the account of the Deluge given by *Moses*, that they are yet willing to allow thus much of it, *viz.* "That *Noah* "being represented as a just man, might have been "inspired to precaution himself against the immi- "nent danger, and have built the Ark for that "purpose." It seems evident however that if *Noah* built the Ark to preserve himself and family from that imminent danger, he not only *might*, but undoubtedly *must* have had an Inspiration or Revelation to that purpose; for how else was it possible for him to have any foreknowledge of a distant future event of that nature more than others? Such a foreknowledge was utterly unattainable, either by natural sagacity, or philosophy or former experiences. This probability or possibility of theirs must of *necessity* then be advanced into an evident *certainty*, *viz.* that *Noah* had undoubtedly a Revelation, or Divine Monition, to build an Ark for his safety, some years before the Deluge came.

II. If *Noah* had a previous Monition to prepare a vessel for his safety, then the event which made that precaution necessary, was foreknown, and foretold

several

ſeveral years before it came to paſs. Here then we have both a Revelation and a Prediction of a diſtant future event, as early as the days of *Noah*, undeniably proved upon us at once, which I deſire thoſe Gentlemen to take notice of.

III. If this Event was foreſeen and predicted long before it fell out, then it was no caſual, accidental thing, as Mr. *C*------'s *Scheme* ſeems to make it; but a deliberate and determinate purpoſe and decree for ſome end or other, and for ſome cauſe or other.

IV. If it was neceſſary for *Noah* to build an Ark for his preſervation, then it would ſeem evident, that he could not otherwiſe have been ſaved from the impending deſtruction. And if ſo, then none other could be ſaved in that part of the Earth where the Inundation happened, contrary to what this Scheme ſuppoſes, *viz.* " That when theſe Waters " made the Inhabitants an unexpected viſit, (as " Mr. *C*------ is pleaſed to expreſs it) it drowned " part of them." If part only were drowned, then part alſo were ſaved, though he does not vouchſafe to tell us by what means. Again, if part of mankind were ſaved from the Inundation, then might *Noah* alſo have been ſaved the ſame way, without the great labour and trouble of building the Ark. But as the Ark was neceſſary to *Noah*'s preſervation, it is highly reaſonable to conclude, that no others were, or poſſibly could be ſaved; becauſe the Flood came upon them on a ſudden and unexpected, when they had taken no precaution for their ſafety.

V. If there was no other way for *Noah*'s preſervation but the building of an Ark, according to the *Monition* and Command given, then there muſt have been a ſufficient reaſon for the diſtinction made between *Noah* and the reſt of mankind. That *Axiom* delivered to us, *that verily God is no reſpecter of perſons, but in every nation he that feareth him and worketh*

worketh Righteousness is accepted with him, seems highly agreeable to right Reason, and the notion we have of the *Divine Rectitude.* According to this great truth then, we may conclude, that had there been more persons who feared God and worked Righteousness, they would have been saved as well as *Noah* and his family; otherwise God's ways were not *equal*, which it is reasonable to believe, and we are expressly told that they are: but as none others were saved, we must necessarily infer that they were such as neither *feared God*, nor *worked Righteousness.*

VI. The Deluge being proved a deliberate, determinate act, with a view to an end; the manifest distinction also made between *Noah* and the rest of mankind in the execution of that act; both these, I say, clearly shew that the Deluge was owing to a *moral* cause, and not merely to a natural cause independent of all moral considerations. This, I say, appears evident.

For, *First*, Every wise man directs important actions to important ends, much more will the all-wise and good God act in this manner. Now nothing could be of greater importance to mankind than their total destruction, one designed end of the Deluge. As this was one designed end, we cannot but conclude, from the acknowledged attributes of the Deity, that they were worthy of that end; that is, they had deserved it; which *Demerit* was the *prime* cause of the Deluge, and therefore a *moral* cause. Mr. *C*------ then might have spared his *If* (*and if really designed as a punishment*) since if destruction and preservation were things quite indifferent, or in all respects the same, then it might be no punishment; but if there be a manifest difference between *preservation* and *destruction*, and this difference manifested at the Deluge, in the preservation of a few, and destruction of the rest of mankind, then it was evidently a punishment on those who perished;

perished; except Mr. *C*------- would have us think of the righteous God what *Solomon* relates of the mad fool, who scatters arrows, firebrands and death; and then saith, *am I not in sport?* Now punishment has always a moral cause for its reason.

Again, had the Deluge been owing merely to a natural cause, independent of all moral considerations, we may presume that in equity and reason the warning given to *Noah* had been also given or communicated to the rest of mankind, had there not been a manifest difference between their case and that of *Noah*'s. Those Gentlemen who reject revelation will not allow it to be said, that God ever acts *arbitrarily* with his creatures, but always according to *rectitude*, and the truth of the case. We grant and assert the same. When therefore so manifest a difference was made between *Noah*, and the rest of mankind, the two cases must have been as manifestly different----that difference was a just and sufficient reason for the different treatment they met with---- that reason was the moral cause of the Deluge, inflicted as a punishment on those who perished, while *Noah*, represented as a just man, was saved.

Should it be alledged, that the warning first given to *Noah* was by him communicated to the rest of the world (as the common opinion is, tho' it will in due time appear to be a mistake) that they might prevent the judgment threatened by a speedy repentance; I reply, that this, were it so, would only prove more strongly what I assert. For if this denunciation of the impending judgment was actually proclaimed to the world, and men paid no regard to it, then they had no regard to God from whom it originally came; that is, they neither feared God nor worked righteousness, but had arrived to a state of impenitence and hardness of heart, like the *Jews* before their captivity, *who mocked the messengers of God, and despised his words, and misused his prophets,*

until

until the wrath of the Lord rose against his people, 'till there was no remedy. *

Thus by taking the matter from its source, *viz.* the *Divine Monition* given to *Noah*, and the command to build the Ark, acknowledged by the Adversaries (as indeed they could not deny it, because it is in a manner self-evident) we have proved these few but important points, as a sure foundation for our future reasoning on this subject. 1. That the Deluge was revealed and predicted to *Noah* several years before it came to pass. 2. That it behoved *Noah* to build an Ark for his preservation, without which he could not have escaped the destroying waters. 3. That no other persons could escape the Inundation, but *Noah* and those with him in the Ark; it being sent as a punishment, and for the destruction of the rest of mankind, and therefore, 4. That the final cause of the deluge was a moral cause. A few points of some moment we shall here leave with unbelievers to reflect on. 1. An early Revelation, and a Prediction of a distant future event, of the greatest importance to mankind, undeniably proved. 2. That the Deluge which involved all mankind in destruction, *Noah* excepted, was owing to a moral cause, *viz.* the wickedness of men; the necessary consequence of which is, 3. That God the righteous Judge beholdeth the things that are done upon earth, and will not suffer sin to go unpunished. So that men may say, *Verily, there is a reward for the righteous, doubtless there is a God that judgeth the earth* †.

* 2 *Chron.* xxxvi. 16.
† *Psalm* lviii. 11.

SECT. III.

The preceding Schemes of a partial Deluge examined.

THE Reader may remember, that the Deluge is by Mr. *C*------- confined to *Mesopotamia*, or between the two rivers of *Euphrates* and *Tigris*, where he supposes all mankind at that time to have lived; but *Vossius* joins *Syria* to *Mesopotamia*, as the bounds of their habitation. Now

First, Had these two rivers been the boundaries of mens habitation, and all the rest of the earth unaffected by the Inundation, then I would gladly know, what occasion or necessity there was for *Noah*'s building an Ark for his preservation, when a far easier and speedier way lay open for his safety? Might he not have crossed either of the rivers in time before the Deluge came, have removed some miles or leagues beyond them, and so have been out of the reach of danger from the Inundation? This he might have done in a few days, instead of more years spent in the construction of the Ark. To every considering person this must appear an insurmountable objection to this *narrow* Scheme of the Deluge, which it is not possible to reconcile to common sense or reason. What reason then does Mr. *C*------- gives for this procedure? Why, *perhaps* Noah *did not know the Earth to be of farther extent than the country he lived in.* But is it any ways probable that mankind living for many hundred years between the two rivers (if these bounded their habitation) should never have cast their eyes beyond them, when the sight could reach far over the broadest of them, the *Euphrates?* Is it probable that men could be for so many hundred years ignorant, that timber could swim on the water, or that no

no man had had the courage to make a *raft* or a boat, nor have the curiosity to set his foot on land on the other side of the river; when some hundred years before they had dug into the bowels of the Earth for *Brass* and *Iron?*

However, let us suppose (though contrary to all sense and reason) that *Noah* perhaps might not know, nay, that really he did not know the Earth to be of much larger extent than the country he lived in, was there no way to inform him of what he was thus ignorant? Could not that same *Revelation* which made known to him the destruction to come on mankind, have at the same time informed him of the Earth's larger extent; and instead of commanding him to build an Ark, have admonished him to cross the River, and pass to a convenient distance?

Nor is the matter a whit mended by *Vossius* his extending the habitation of mankind to *Syria*, as well as *Mesopotamia*; for still there was Land enough beyond these bounds, to which *Noah* might with far less trouble, and in much less time, have removed to be out of danger. We might surely then expect a better reason for this conduct of *Noah*'s, or rather of the *Divine* Monition to him, from our learned Author, who, though he passes over the objection in the two preceding *Tracts* which I have quoted, thinks fit to take notice of it in his letter to *Andrew Colvius*, as it might be well expected that he should, being a very obvious objection to his narrow Scheme of the Deluge; but in truth it is not a whit better than the former. "They do not "(says he) argue rightly, who say, that unless the "whole Earth had been covered by the waters, "*Noah* might have removed to dry land, and thus "have saved his labour in building so large a vessel. "God reasoned otherwise when he thought fit that "*Justice* should be done in a convenient place. But

" what more convenient place can be imagined than " that, where the guilty ſhould be puniſhed in the " *ſight* of *Noah*, and he who was innocent preſerved " in the midſt of ſinners?" Why truly, had God thus reaſoned, I ſhould humbly have ſubmitted to a reaſon that proceeded from infinite Wiſdom, but it does not in the leaſt appear that he reaſoned thus at all; and we muſt beware of imputing our own ſhallow reaſonings to the *Divine* Being. We have ſomewhat a parallel caſe to this, that will ſhew the weakneſs of ſuch a reaſon. God deſigned to deſtroy *Sodom*, and the other cities of the Plain, for their abominable and unnatural crimes. *Lot* dwelt in the midſt of them, whoſe *righteous Soul was grieved with the filthy converſation of the wicked* inhabitants, as we may believe *Noah*'s was with that of the Old World; but could not Juſtice be done upon thoſe ſinners, except *Lot* had ſeen it with his own eyes? So far otherwiſe, that he was expreſly forbid to look back to ſee it, and it coſt his wife her life for ſo doing. But to the caſe in hand. Before whom were the men of the old world guilty? Were their crimes againſt the laws of *Noah*, that he muſt needs behold the execution of the judgment; or againſt thoſe of God, the Author of their being? What Satisfaction could it have been to *Noah*, to behold the dreadful deſtruction of mankind? I imagine it would have been a grief of ſoul to him, or any righteous perſon, notwithſtanding they had ſo much deſerved the puniſhment inflicted. But, indeed, how could he ſee it at all, when he was cloſe ſhut up in the Ark? He could have ſeen it (had that been in the leaſt neceſſary) much better on ſome diſtant mountain, which the Flood was not to reach. But as in the caſe of *Lot*, ſo here in that of *Noah*, God deſigned that neither of them ſhould ſee the deſtruction of the wicked. This reaſon given by *Vaſius*, therefore, is ſo far from being a ſatisfactory

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solution, that it is nothing but a sorry shift and evasion; such as he frequently objected to poor *Hernius*; and plainly shews, that the objection I have mentioned is unanswerable, upon this and every such narrow Scheme of the Deluge.

II. The utter improbability of building an Ark, on the supposition of a *partial* Deluge over so small a part of the Earth, is not the only strong objection to the two *Schemes* now under examination; there is another of equal force against them. *Noah* took with him into the Ark animals of every kind, birds of the air, beasts of the field, and creeping things, male and female. What necessity was there for this, or what reason can be assigned for this conduct? Had the Inundation covered only so small a part of the Earth as they pretend, there was no need to take in animals of any kind. Animals of all kinds must, in the course of one thousand six hundred, or two thousand years, have spread themselves far beyond the bounds of *Syria* and *Mesopotamia*, though but one pair of each kind had been created at first. They increase much faster than mankind does, and, where undisturbed, are exceeding numerous. Now a short time would have conveyed the Ark out of *Mesopotamia* or *Syria*, and a few days provision for his family was all that *Noah* stood in need of, in that case.

To this obvious and strong objection against his partial Scheme, *Vossius* gives not the least answer, no not in his Letter to *Andrew Colvius*; but Mr. C--------, who could not but be sensible of it, offers a double reason for this precaution of *Noah*. *First*, "That it might be for the subsistence and preser-" vation of his family." Or, *secondly*, "That he" did not know how long the waters were to con-" tinue on the face of the Earth, or whether they" were ever to retire into their former beds."

I desire the Reader may observe, that it is confessed that animals of every kind were taken into the Ark. Now this must have been done with a certain design, and to a certain end. That end must have been either for the subsistence of *Noah* and his family, during their confinement in the Ark, or else in order to propagate every species of animals upon the new Earth, after the retiring of the waters; or partly for one, and partly for the other. But that they were not taken into the Ark for the subsistence of the persons inclosed, will appear evident from the following reasons.

I. The far greater part of them was unnecessary for that purpose, not only because the number was too great for eight persons during a short confinement, as it would have been on their Schemes; but that much the greater part could not be for *food*, except we can suppose *Noah*'s family to have been like the *Hotentots* at the *Cape* of *Good-Hope*, to eat *Lions*, *Bears*, *Tygers*, &c. or that they delighted in the flesh of *Horses*, *Camels*, *Elephants*, and such like; or that *Frogs*, *Toads*, *Vipers*, *Serpents*, and all manner of creeping things were their dainty food, instead of the domestick kinds, the now ordinary food of mankind, with plenty of which they might have stored themselves.

II. None of them could be taken in for food, because animals were not yet become the food of mankind. The permission to eat flesh was not given till after the Flood, when it was given in express terms to *Noah*. *Every moving thing that liveth shall be food for you; even as the green herb, have I given you all things; but flesh, with the life thereof, which is the blood thereof, shall you not eat* *. But the food appointed for man at the beginning, was no more than this: *Every herb bearing seed, which is*

* Genes. ix. 3, 4.

upon

upon the face of all the Earth, and every tree in the which is the fruit of a tree yielding seed, to you it shall be for meat *. Though man's food, after his expulsion from Paradise, was enlarged to bread-corn produced by labour and tillage †, which was not necessary to him before the Fall. That in the first ages of the world men lived on the fruits of the Earth, was the general opinion of the Ancients ‖; which is a confirmation of the account of this matter given by *Moses*; and it was thought a kind of impiety in those who first began to eat animal food; whence that of the Poet,

----------Ante
Impia quam cæsis gens est epulata juvencis.

As some Indian *Casts* and Sects do abstain from it to this day. Now, though we should suppose the

* Genes. i. 29. † Genes. iii. 19.

‖ Quod Sol, atque Imbres dederant, quod Terra creârat
Sponte sua, satis id placabat pectora dônum;
Glandiferas inter curabant corpora quercus——

LUCRETIUS.

——Immunis rastroque intacta, nec ullis
Saucia vomeribus, per se dabat omnia tellus:
Contentique cibis nulio cogente creatis,
Arbuteos fœtus; montanaque fraga legebant,
Cornaque, & in duris hærentia mora rubetis;
Et quæ deciderant patulâ Jovis arbore glandes.

OVID. *lib.* 1. *Metam.*

At vetus illa ætas, cui fecimus Aurea nomen,
Fœtibus arboreis, &, quas humus educat, herbis
Fortunata fuit: nec polluit ora cruore.
Tunc & aves tutas movere per æra pennas;
Et lepus impavidus mediis erravit in agris:
Nec sua credulitas piscem suspenderat hamo.

Idem. lib. 15.

These passages shew, that it was the opinion of the ancients that mankind, in the first ages, lived on the fruits of the earth, and not on animal food; though I do not take them to have been so rude and unskilful, as to have no better fruits to feed on than what are here specified.

wicked race of men before the Flood to have transgressed the Law given them for food, (which yet I can see no reason to grant, as it never can be proved) we can hardly suppose the righteous Line of *Seth* (whose descendants only were in the Ark) to have been guilty of the same transgression; since they could not forget the fatal effect which the eating the *forbidden fruit* had upon *Adam* and all his posterity. But to let this question, *viz.* Whether animal food was eaten before the Deluge, pass for the present, which we shall have occasion to resume again; That the sole end of taking animals of all kinds into the Ark was to keep every species alive, and to propagate every kind upon the Earth when the waters were gone off, will appear evident; because,

I. They were taken in male and female, which was surely in order to keep up the breed: Had they been taken in for food, it was no matter whether male or female.

II. Because food was ordered to be laid up for them all, during the time of their confinement. *Take thou unto thee of all food that is eaten, and thou shalt gather it to thee, and it shall be for food for thee and for them* *, (which, by the way, implies that *animal* food was not the food of mankind, at least of that family at the time.)

III. From what is said to *Noah* concerning them, when the Flood was over. *Bring forth every living thing that is with thee, of all flesh both of fowl and of cattle, and of every creeping thing that creepeth upon the Earth, that they may breed abundantly, and be fruitful and multiply upon the Earth* †. Hence it is evident, that all that were commanded to be taken in were ordered to be brought forth; which shews, that they were all preserved alive in the Ark: And here likewise is expressed the end for which they were

* Gen. vi. 21. † Genes. viii. 17.

pre-

preſerved, which was, to breed and propagate their ſeveral kinds upon the renewed Earth.

Now if the Flood was *univerſal in extent*, the taking into the Ark animals of every kind was abſolutely neceſſary to repleniſh the new World, which otherwiſe muſt have been deſtitute of all the Land animals, and, in that caſe, had ſtood in need of a *new* creation. But, upon the ſuppoſition of a partial Deluge over ſo ſmall a part of the Earth, was altogether needleſs, a great and uſeleſs trouble, like carrying water to the Sea, or coals to *Newcaſtle*, as the vulgar ſaying is; a folly, which that infinite Wiſdom, which gave the command, could not be guilty of.

II. As to the ſecond reaſon alleged, *viz.* "That "*Noah* did not know how long the waters were to "continue upon the face of the Earth, or if they "were ever to retire into their former beds, *&c.*" It is not indeed ſaid, that the time of the waters continuance was revealed to *Noah*, and it may be thought not convenient to apprize him of it, leſt the length of the time ſhould have diſheartened him and his young family; but it was neceſſary that he ſhould know, though not the preciſe number of days, yet the Flood's continuance for a year and more; ſince otherwiſe he could never proportion the quantity of food to the time and the number of animals, but muſt either have fallen far ſhort, or far exceeded; either of which had been highly inconvenient. But to imagine that he ſhould be in any doubt whether the waters would ever retire into their former beds, is altogether abſurd. For to what purpoſe did he build the Ark, but for his own preſervation, while the reſt of mankind were to be deſtroyed? And to what purpoſe was his preſervation, if the waters were never to retire? He might as well have periſhed with the reſt of mankind at

firſt,

firſt, as to linger out a tedious and troubleſome confinement for a few months or years longer.

III. Had the Inundation been deſigned for *Meſopotamia*, or that and *Syria* only, what occaſion was there for ſuch a profuſion of waters, *viz.* A rain of forty days and forty nights, and the breaking up the fountains of the Deep for a much longer time? An infinitely leſs quantity would have ſufficed for drowning ſo ſmall a part of the Earth. One night's inundation by a violent rain, and the eruption of waters from the Earth, drowned a very large province in *China* about two hundred years ago, by which every living creature periſhed in it, ſave one child of ſeven years of Age *.

IV. *Noah* was a whole year and more in the Ark. In the caſe of an Univerſal Deluge over all the Earth, this is very credible; ſince the time here is proportional to the effect, *viz.* The drowning the whole Earth, and the drying it again for the habitation of mankind; but on the ſuppoſition of ſo ſmall a part of the Earth's being inundated, (not the hundredth part, as *Voſſius* pretends) the length of the time is no ways proportioned to the fact ſuppoſed. A much ſhorter time would have ſufficed for that purpoſe.

V. If *Syria* and *Meſopotamia* were only ſubjected to the Deluge, how came the Ark to reſt on one of the mountains of *Ararat*? Whether that mountain was one of the *Gordyean* hills which ſeparate *Armenia* from *Meſopotamia*, or part of the mount *Taurus*, according to St. *Jerome*, or a mountain near *Saga-Scythia* on the hills beyond *Bactria*, as ſome moderns now ſuppoſe, all theſe hills are far beyond the limits preſcribed by them to the Deluge. Before the waters, therefore, could reach and cover the top of any of theſe mountains, they muſt have

* See the relation in book ii. chap. 3. ſect. 1.

ſpread

spread a prodigious way beyond them, and on all sides of them, consequently not *Mesopotamia* and *Syria* alone were subjected to the Deluge.

VI. An insuperable objection to any *partial* or local Deluge is this: That it is impossible, in Nature, that the waters could have covered any high hills fifteen cubits upwards, till they had risen every where to an equal surface; for as they still mounted upwards, they would still spread and extend themselves on all sides, till there was no place vacant; and must have risen to an equal height every where over the Earth, before they could cover the mountains fifteen cubits upwards any where. This last argument, 'tis true, will not affect those who reject not only the *Divine* Authority, but the *Truth* of *Moses*'s History; but it is strong against *Vossius*, who believed both.

1. *Vossius* pretends, "That *Divines* confessed they "would have embraced his opinion, if it was cer- "tain that the animals and wild beasts had been "no where else upon the Earth but where men in- "habited; but they thought this no way probable, "since, from the first creation, every Land had its "own animals." To this he answers, that by the word *all* in Scripture (as indeed in other authors as well as in common speech) we are not to understand *all* universally, since it is often taken for any integral part. But the question is, whether it can be so understood in this place consistently with the Context. The words of *Moses* seem very express to the contrary. *And all flesh died that moved upon the Earth, both of fowl and of cattle, and of beast, and of every thing that creepeth upon the Earth, and every man, all in whose nostrils was the breath of life, of all that was in the dry land died; and every living substance was destroyed which was upon the face of the ground, both man and cattle and creeping thing, and the fowl of heaven, and they were destroyed from the Earth,*

and

and Noah *only remained alive, and they that were with him in the Ark* *. Now an entire destruction of every living creature upon the face of the whole Earth cannot be delivered in more full, express, and positive words than is here done, which extend the sense of the word *All* to an Universality. As little will these words of *Moses* agree with that narrow Scheme of the Deluge he has given us.----*And the waters prevailed exceedingly upon the Earth, and all the high hills that were under the whole Heaven were covered* †. Can this possibly mean, that the high hills in *Mesopotamia* and *Syria* only were covered? Or are there no other high hills under the whole Heaven but what are there? Moreover,

Secondly, Against the Scheme given us by *Vossius*, that passage in St. *Peter*'s second Epistle may be strongly urged. *For this they willingly are ignorant of, that by the word of God, the Heavens were of old, and the Earth standing out of the water and in the water, whereby the World that then was perished. But the Heavens and the Earth which are now, by the same Word, are kept reserved unto fire against the day of judgment and perdition of ungodly men.----But the day of the Lord will come as a thief in the night, in which the Heavens shall pass away with a great noise, and the Elements shall melt with fervent heat, the Earth also and the works therein shall be burnt up* ‖. Here the Apostle speaks of this sublunary world, the Earth and its *Atmosphere* (for the fowls fly in the midst of Heaven). 2. He expressly says, the World that then was perished by water. 3. That the World that now is, is reserved unto fire, and that the Earth and all the works therein shall be burnt up §.

The

* Genes. vii. 21, 22, 23, 24. † Genes. vii. 19.

‖ 2 Ep. iii. 5, 6, 7, 10.

§ That the present World is to be destroyed by fire, was an ancient and common tradition, mentioned by several authors as well

The subject of the whole passage is one, the *Earth* or *this World*, distinguished into the *old* and the *present*. The *Antithesis* is between the destruction of the old World, and that of the present; the first was by water, this to be by fire. We may then as well suppose, that a small part of the present World will be destroyed by fire at the last day, as to say, that a small part of the old World perished by water.

But to our present purpose, it is farther to be observed, that when the Apostle speaks of the Earth at is first Creation, he calls it η γῆ, when destroyed by water, ὁ κόσμος: now κόσμος is surely a word of as large extent as οἰκουμένη, and *Vossius* ought to pay some more regard to St. *Peter* than to *Josephus*, if he meant ἠπειρος in the sense *Vossius* would put upon it, though there is more reason to think he did not.

Thus it appears that the learned *Vossius*, who asserted a *partial* Deluge, had not well considered to how many strong objections his *Scheme* was liable, as well as utterly inconsistent with the account of the Flood given by *Moses* and St. *Peter*; but to avoid some difficulties on one hand, which perhaps may be accounted for, has run upon unsurmountable difficulties on the other.

Thus much for *Vossius*; a word or two now to those who deny the truth of the *Mosaic* history. One reason why some persons are for dwindling the Flood of *Noah* into a partial Deluge is, that they are very shy to admit any such thing as a *miracle*; but now it falls out unluckily, that the *Scheme* they have given us by Mr. *C*------, or he for them, is impossible to have been effected without a miracle; whereas had they left the Deluge as they found it, *universal in extent*, there needed no miracle in the in-

well as by *Ovid* in his description of the *Deluge*, where speaking of *Jupiter*'s design to destroy the World, he saith,

Esse quoque in fatis reminiscitur, affore tempus,
Quo mare, quo tellus, correptaque regia Cœli
Ardeat; & mundi moles operosa laboret.

stance

ſtance we are now to give. Let us then, for once, ſet aſide *Moſes* and his hiſtory of the Deluge, and ſee what will be the Iſſue.

By the Scheme they have given us it is acknowleged, that there was a Flood in the days of *Noah*, that he built an Ark for his preſervation, and that he took in a great many animals into it, which it is pretended was for the ſubſiſtence of his family, as not knowing how long the Deluge would laſt, or that the waters were ever to retire. If that was the true reaſon, he muſt have taken in great numbers, and the Veſſel could be no ſmall one. Before it could float, the waters muſt have riſen to ſome height, and before it reſted, to a much greater. We need not have recourſe to *Moſes* to prove that it reſted on a mountain, for profane authors affirm the ſame according to ancient tradition; and we may reaſonably conclude that it was on the top of the mountain it reſted, for had it been on the ſide, or a *declivity*, it would inſtantly have tumbled down. Now before the waters could cover the top of the mountain, ſo as the Ark could be waſted upon it, they would naturally be running off on all ſides, and wherever they found a deſcent. To confine the Deluge therefore within the pretended limits, and at the ſame time to raiſe the waters to cover any mountain to ſuch a height as the Ark would require (ſuppoſing it might draw ten, twelve, or thirteen Cubits) is abſolutely impoſſible, without a miracle, to hem and wall them in to the height required on all ſides, ſince otherwiſe they would naturally fall off to the lower grounds without ceaſing, till they met with a ſtop. But what ſhould ſtop them? Except we ſhould ſuppoſe a tract of higher mountains quite ſurrounding and encloſing that part of the Earth they have allotted to the Deluge, which is not pretended, nor any where to be found, ſince there is in all places an outlet for the waters that fall from the mountains?

mountains? But if we will allow the Deluge to have been, as it is represented, *universal* in extent, there was no need of a miracle in this case; since if we can find but a sufficient quantity of waters to overflow the Earth, let them arise any where to what height you please, and be still encreasing, they will *naturally* run off on all sides, till they come to be of an equal height or surface every where, and at last put on the same spherical or spheroidical figure with that of the Earth. Is not the matter much mended now? To avoid a miracle, where it was not necessary nor wanted, they have framed a *Scheme* of the Deluge which cannot possibly be executed without a miracle, and a great one too, greater than that of dividing the *Red-Sea*, and walling it on each side for the passage of the Israelites *; greater, because of its much larger extent, and much longer continuance.

The

* *And the waters were a Wall unto them on their right hand, and on their left.* (Exod. xiv. 22.) "That is, saith Sir *Walter* "*Raleigh*, the waters so defended them on both sides, as the "*Egyptians* could only follow them in the same path; not that "the waters stood upright as walls do, as some of the School-"men have fancied. For had *Pharaoh* and the *Egyptians* per-"ceived any such buildings in the Sea, they would soon have "quitted the chase and pursuit of *Israel*." But to this it may be objected, that the *Egyptians* might not perceive that they were entering the channel of the sea, it being in the Evening when they came in sight of the *Israelites*; and besides, the Pillar of the Cloud removed from before the Camp of *Israel* and went behind them, and came between the Camp of the *Egyptians* and the Camp of *Israel*; and it was *a cloud and darkness to them, but gave light by night to these, so that the one came not near the other all the night.* The whole Transaction appears to have been after this manner.

The Red-Sea lies South and North, and the breadth of it, where the *Israelites* passed, is about four miles. When *Moses* cried unto God, he was commanded to lift up his Rod, and stretch it over the Sea and divide it, and *God caused the Sea to go back by a strong East wind all that night, and the Waters were divided.* As soon as *Moses* perceived the waters retiring before him

The reader may now pleaſe to obſerve, that from the Adverſaries conceſſions (and it is a *maxim* in Law, that a man's confeſſion ſhall be ſtrongly pleaded againſt himſelf) we have before proved undeniably, 1. A Divine Revelation as early as the days of *Noah*. 2. The Prediction of a future Event of great moment, of no leſs importance than the deſtruction of all mankind, long before it came to paſs; and now, 3. The abſolute neceſſity of a miracle to effect the narrow Scheme of a *partial* Deluge. We ſhall therefore diſmiſs our two *Schemiſts* for the preſent, till we have occaſion to bring them again on

him (for the Pillar gave them light) he marched forward about the middle of the night. The Pillar of the Cloud which ſtood between the two Camps followed the *Iſraelites* as they marched forwards, and then the *Egyptians*, who were not far behind, purſued after *Iſrael*, ſo that indeed they entered the channel of the Sea by night; but whether they knew they were in the Sea or not, is uncertain; though one would think they might know it before they marched far, as their faces were directly to the Sea. By the fourth Watch, *i. e.* at break of day, the *Egyptian* Hoſt was all within the Seas (and then they could not but know it) though all the *Iſraelites* might not yet be arrived on the oppoſite ſhore. For then it is ſaid, that *the Lord looked unto the Hoſt of the Egyptians through the Pillar of fire, and of the Cloud and troubled the Hoſt of the Egyptians*, that is, put them into diſorder and confuſion, by *rains, thunders and lightnings*, as it is in the 77th *Pſalm*, 16, 17, 18. which are generally underſtood of this paſſage of the Red Sea. The Rains moiſtened the ſands, which at firſt made them drive heavily, and the Thundrings and Lightnings diſturbed the horſes; and by *Moſes*'s ſtretching his hand again over the Sea, when the people were all come to the other ſide, the Sea returned by degrees to its former place; and, as it roſe, took off the wheels of their chariots, which then muſt ſtick in the ſands: And by this means the whole Hoſt was drowned, not one of them eſcaping. And whereas it is ſaid by *Moſes* in his Song, *The flood ſtood upright as an heap*, and by the Pſalmiſt, And *he made the waters to ſtand as an heap*. (Pſalm lxxviii. 13.) Theſe may be deemed only poetical expreſſions; and yet where the diviſion of the waters on each ſide ended, to thoſe who paſſed along the Channel, they would appear as a wall and an heap, there being ſeveral fathoms between the bottom and the ſurface of the Sea, eſpecially in the middle.

on the stage, having shewed that their Schemes are neither consistent with the History, nor with Reason, but, on the contrary, are liable to insuperable difficulties, and involved in absurdities.

SECT. IV.

A Third Scheme of a partial Deluge; but far more extended, in the learned Bishop Stillingfleet's Origines Sacræ.

THE two foregoing Schemes of the Deluge, being found to consist with neither reason, nor the account of it given by *Moses*, I shall next consider what is offered in favour of a *partial* Deluge, though farther extended by our very learned Bishop *Stillingfleet* in his *Origines Sacræ*. This valuable author, when he comes to treat of the Flood, having mentioned the grand objection against the possibility of an Universal Deluge, from the want of sufficient waters to cover the whole Earth to the height mentioned, gives a two-fold answer to it. 1. On supposition that *Noah*'s Flood was only *local* in extent, though *universal* in effect as to mankind. 2. On supposition that it was universal in extent also. It is the first of these only we have here to do with, and which seems to have been the Author's own opinion.

" First, says he, I cannot see any urgent necessity " from the *Scripture* to assert, that the Flood did " spread itself over all the surface of the earth. That " all mankind (those in the Ark excepted) were de- " stroyed by it is most certain according to the " *Scriptures*. When the occasion of the Flood is " thus expressed; *And God saw that the wickedness* " *of man was great upon the Earth, and that every* " *imagination of the thoughts of his heart was only evil* " *continually. And the Lord said, I will destroy man*

" *whom I have created from the face of the Earth.** " It could not be then any particular Deluge of so " small a country as *Paleſtine*, which is here ex- " preſſed, as ſome have ridiculouſly imagined, for " we find an univerſal corruption in the Earth, " mentioned as the cauſe, an univerſal threatening " upon all men for this cauſe, and afterwards an " univerſal deſtruction expreſſed as the effects of " this flood. *And all fleſh died that moved upon the* " *Earth-----and every man, and every living ſubſtance* " *was deſtroyed which was upon the face of the ground*; " *both man and cattle, and creeping things, and the* " *fowl of Heaven, and they were deſtroyed from off the* " *Earth*; *and* Noah *remained only alive, and they that* " *were with him in the Ark* †. So then it is evident " that the Flood was univerſal as to mankind. But " from thence follows no neceſſity at all of aſſerting " the Univerſality of it as to the Globe of the " Earth, unleſs it be ſufficiently proved that the " whole earth was peopled before the Flood, which " I deſpair of ever ſeeing proved. And what rea- " ſon can there be to extend the Flood beyond the " occaſion of it, which was the corruption of man- " kind ‖? And it ſeems very ſtrange that in ſo ſhort " an Interval, in compariſon, as that was from " *Adam* to the Flood, according to the ordinary " computation, *viz.* one thouſand ſix hundred and " fifty ſix years, and not much above two thouſand " according to the largeſt computation, the world " ſhould then be fully peopled, when in ſo much a " longer ſpace of time ſince the flood to this day, " the earth is capable of receiving far more Inha- " bitants than now it hath.

" The only probability then of aſſerting the Uni- " verſality of the Flood, as to the Globe of the " Earth, is from the deſtruction of all living crea-

* Geneſ. vi. 5, 7. † Geneſ. vii. 21, 22, 23.

‖ A reaſon will be ſhewed in the courſe of this Inquiry.

" tures, together with man. Now though men
" might not have spread themselves over the whole
" surface of the Earth, yet beasts and creeping
" things might, which were all destroyed with the
" Flood: for it is said, *that all flesh died, that moved*
" *upon the Earth, both of fowl and of cattle, and of*
" *every creeping thing that creepeth upon the Earth,*
" *and every man.* To what end should there be not
" only a note of Universality added, but such a
" particlar enumeration of the several kinds of
" beasts, creeping things and fowls, if they were
" not all destroyed?

" To this I answer, I grant that as far as the
" Flood extended, all these were destroyed, but I
" see no reason to extend the destruction of these
" beyond that compass and space of Earth where
" men inhabited; because the punishment upon the
" beasts was occasioned by, and could not be con-
" comitant with the destruction of mankind; but
" (the occasion of the Deluge being the Sin of man,
" who was punished in the beasts that were de-
" stroyed for his sake, as well as in himself) where
" the occasion was not, as where there were
" animals and no men, there seems no necessity of
" extending the Flood thither.

" But to what end will it therefore be replied,
" did God command *Noah* with so much care to
" take all kinds of birds, beasts, and creeping things
" into the Ark with him, if all those living crea-
" tures were not destroyed by the Flood? I an-
" swer, because all those things were destroyed
" where-ever the Flood was. Suppose then the
" whole Continent of *Asia* was peopled before
" the Flood, which is as much as in reason we may
" suppose, I say all the living creatures in that Con-
" tinent were destroyed; or if we may suppose it
" to have extended over our whole continent of the
" anciently known world, what reason would there
" be, that in the opposite part of the Globe, *viz.*

" *America*, which we ſuppoſe to be unpeopled then, " all the living creatures ſhould there be deſtroyed, " becauſe Men had ſinned in this? And would there " not have been on this ſuppoſition a ſufficient rea- " ſon to preſerve living creatures in the Ark for fu- " ture propagation, when all other living creatures " extant had been in ſuch remote places, as could " not have been acceſſible by them in many genera- " tions; and thoſe beaſts growing wild for want of " inhabitants, would not have proved preſently ſer- " viceable for the uſe of man after the Flood, which " was certainly the main thing looked at in the pre- " ſervation of them in the Ark, that men might have " all of them ready for their uſe after the Flood, which " could not have been, had not the ſeveral kinds " been preſerved in the Ark, although we ſuppoſe " them not deſtroyed in all parts of the world.

" All this proceeds on ſuppoſition that animals " were propagated much farther in the World than " mankind was before the Flood. Which I confeſs " ſeems to me very probable on this account, be- " cauſe the production of animals is parallel in *Ge-* " *neſis* with that of fiſhes, and both of them diffe- " rent from man. For God ſaith, *Let the Waters* " *bring forth every moving creature that hath life*, " *viz.* fiſh and fowl; and accordingly it is ſaid, " *that the waters brought forth abundantly every liv-* " *ing creature after their kind, and every fowl after* " *his kind* *. Accordingly, in the production of " beaſts, we read, *Let the Earth bring forth the liv-* " *ing creature after his kind, cattle and every creeping* " *thing and beaſt of the Earth after his kind, and it* " *was ſo* †. But in the production of man it is ſaid, " *Let us make Man in our image, after our likeneſs* §. " From hence I obſerve this difference between the " production of animals and of man; that in one " God gave a prolific power to the Earth and Wa- " ters, for the production of the ſeveral living crea-

* Geneſ. i. 20, 21. † Geneſ. i. 24. § Geneſ. i. 26.

" tures

" tures which came from them, so that the seminal
" principles of them were contained in the matter
" out of which they were produced, which was
" otherwise in man, who was made by a peculiar
" hand of the great Creator himself, who thence is
" said to have *formed* Man out *of the Dust of the*
" *Ground.*

" Now, therefore, although there were but one
" male and female of mankind at first, which had
" a special formation by God himself, yet there is
" no reason we should conceive it to be so as to the
" production of other living creatures, whether fish,
" or fowl, or beasts. But the prolific virtue being
" by God's power given to the material principle
" out of which they were formed, it may very well
" be supposed that many of the same kind were at
" first produced. For it seems very strange to ima-
" gine, that in the whole Ocean there should be but
" only two of a kind produced. But fish and fowl
" both arising from the Waters, we may have just
" reason to think that the Waters being separated
" before this prolific virtue was communicated to
" the whole mass of Waters, might in the several
" parts of the globe of the Earth, bring forth both
" fish and fowl after their kinds.

" The same I say of the production of animals
" in the sixth day's work, which are ranked into
" three sorts, *cattle*, *creeping things*, and *beasts* of
" the Earth after their kinds. Now God saying,
" let the Earth bring forth her living creatures (and
" that after the Waters had divided some parts of
" the Earth from other, so that there could be no
" passage for the cattle, creeping things and beasts,
" of one part into another, without the help of man)
" it seems very probable that at least those parts of
" the Earth which were thus divided from each
" other, did bring forth these several living crea-
" tures after their kinds, which did after propagate
" in those parts without being brought thither by

" the help of man. If now this ſuppoſition be em-
" braced, by it we preſently clear ourſelves of many
" difficulties concerning the propagation of animals
" in the world, and their conſervation in the Ark,
" which many have been ſo much to ſeek ſatisfaction
" in. As how the unknown kind of ſerpents in
" *Brazile*, the ſlow-bellied creature in the *Indies*,
" and all thoſe ſtrange ſpecies of animals ſeen in the
" *Weſt-Indies*, ſhould either come into the Ark of
" *Noah*, or be conveyed out of it into thoſe coun-
" tries which are divided from that Continent, by
" ſo vaſt an ocean on one ſide, and at leaſt ſo large
" a tract of land on the other (ſuppoſing any paſ-
" ſage out of one Continent into another, which yet
" hath not been diſcovered) beſides ſome kind of
" animals cannot live out of that particular clime
" wherein they are; and there are many ſorts of
" animals diſcovered in *America*, and the adjoining
" iſlands, which have left no remainders of them-
" ſelves in theſe parts of the world. And it ſeems
" very ſtrange that theſe ſhould propagate into thoſe
" remote parts of the World from the place of the
" Flood, and leave none at all of their number be-
" hind them in theſe parts from whence they were
" propagated *.

" Theſe things at leaſt make that opinion very
" probable, which extends the production of ani-
" mals beyond that of mankind in the Old World;
" and that the Flood though it deſtroyed all man-
" kind, and every living creature where mankind
" inhabited, yet might not extend itſelf to thoſe
" parts, and the animals therein, in which men never
" had inhabited. And by this means we need not
" make ſo many miracles, as ſome are fain to do,

* For the ſame reaſon, *viz.* the new and unknown creatures found in *America*, *Mercator* thought that the Deluge drowned not thoſe parts, ſuppoſing that men had not there inhabited, who, with a deluge of ſin, might procure that deluge of waters.

" about

" about the Flood; and all those difficulties con-
" cerning the propagation of animals do of them-
" selves vanish and fall to the ground.

" This is the first way of resolving the difficulty
" concerning the possibility of the Flood, by as-
" serting it, not to have been over the whole Globe
" of the Earth, but only over those parts where
" mankind inhabited." Thus far our learned Author.

In the above-cited passage the utmost is urged that can be said in Defence of a partial Deluge; and it must be confessed that it starts some considerable difficulties with respect to a Deluge *universal* in extent. Nevertheless I answer for the present,

1. That those passages of Scripture quoted partly by the learned Author, but more fully in the preceding Section against *Vossius*, are equally strong against this more enlarged Scheme, especially those words of *Moses* omitted here by our Author. *And the Waters prevailed exceedingly, and all the high hills that were under the whole Heaven were covered*; as also those words of St. *Peter*, that ὁ κόσμος, *the world that then was* perished by water, which expressions will not allow us to admit even of this more extended Scheme.

2. That though a full proof that the whole Earth was peopled or inhabited by mankind before the Deluge, can neither be given, nor in reason expected, yet I shall shew

That by a moderate computation, with as large allowances with respect to increase as can be desired, the number of mankind before the Deluge must have been far greater than it is at present, or has been at any time since the Flood.

That though mankind had not been so numerous at the time of the Deluge as they are at present, yet they must have extended themselves over the face of the Earth, and that they could not live in such

numbers together as men do now, *viz.* ſome hundred thouſands in one great city. And alſo ſhew the reaſons why mankind has not multiplied ſince the Flood, in proportion to what it did before it. But theſe in their due order and proper places, to avoid repetitions.

3. If the World that *then* was periſhed by Water, according to St. *Peter*, and all the high hills under the whole Heaven were covered, as is expreſly affirmed by *Moſes*, then it is evident that all the animals, as well where men inhabited as where they did not (if any ſuch place there was) muſt have periſhed.

4. If the Flood did not extend beyond the Continent of *Aſia*, which our Author thinks might contain all mankind at that time upon the Earth, then ſome of the ſtrongeſt objections againſt the two former Schemes will equally lie againſt this. For

1. On this ſuppoſition, there appears no manifeſt neceſſity for building the Ark. In far leſs time, and with much leſs trouble, might *Noah* with his ſmall family have removed into any other part of the Earth, and have been out of the reach of the Inundation. And it is reaſonable to think that in this caſe, God would not have put *Noah* upon the great labour of building ſo large a veſſel; or the great trouble of taking care of the animals in it, had there not been an abſolute neceſſity for it.

It may poſſibly here be urged, that *Noah* could not take ſuch a journey with ſafety to his perſon, becauſe as *Violence* was the crying ſin of that generation of men, he might have been in danger to be cut off with his family. To this I anſwer, that the ſame Providence which preſerved *Abraham* in all his peregrinations, notwithſtanding his fears, and *Jacob* from the violence of *Laban* who purſued him with an *evil* intent, as alſo from the hand of *Eſau* who came againſt him with four hundred men, and from

the

the inhabitants of *Canaan* after his sons revenge upon the *Shechemites*, by striking them with a *panic* so that they pursued him not, and likewise *Joseph* from the hands of his brethren who purposed to kill him, could as easily have preserved *Noah* from all the perils of such a journey, could that have placed him out of the reach of danger from the Inundation. And thus it was he saved *Lot* from the destruction of *Sodom*, by taking him out of the place that was to be destroyed.

5. Had the Continent of *Asia* only been inhabited by mankind, as is here supposed, and the animals had extended themselves much farther, as would certainly be the case on that supposition, then, I say, there was no necessity for *Noah*'s taking into the Ark with him *animals of every kind*, which greatly increased his care and his trouble. *Animals*, I say, *of every kind*, fowls, cattle, beasts of the field and creeping things. Had *Asia* alone been inundated, and the Ark rested on some mountain in the same Continent, I agree with our Author, that it had been necessary for *Noah* to have taken in some animals into the Ark, such, namely, as were useful to mankind, because it might have been many years, perhaps an age or two, e're such animals had spread themselves again into *Asia*, from the other Continents of *Europe* or *Africa*. But then what necessity was there, or what reason can be assigned for his taking in animals that were not only not useful, but hurtful and pernicious both to mankind and other creatures, such as Lions, Tygers, Wolves, Serpents, &c. by which men are often destroyed? The *noisom beast* being accounted one of God's four sore judgments *. When men remove their habitation to some distant place or country, they may take useful creatures along with them, but not Rats, Vermine, or other destructive animals. Thus the *Por-*

* Ezek. xiv. 21.

tuguese

tuguese and *Spaniards*, transported into the Islands they had discovered in the *Indies*, and into *America*, sheep, goats, hogs, horses, and the like, but not animals noxious or pernicious to mankind. We may therefore well suppose that had it been left to *Noah*'s choice, he would have taken none such into the Ark. But the Command ran otherwise.

Hence it is evident that the main thing looked at in the preservation of the animals in the Ark was, not as is here alledged, *that men might have all of them ready for their use after the Flood*, since several kinds of animals were equally preserved that were not for their use, but the contrary. But the design of taking animals of every kind, male and female into the Ark, appears plainly to be this; that as God in his infinite Wisdom had thought fit to create a great variety of creatures of different kinds, for ends and uses best known to himself, and that all these were now to be destroyed with man; yet he would not suffer the creatures he had once made utterly to perish; but his *Will* was, that all and every kind of them should be continued while the Earth remained; and therefore he commanded the *noxious*, as well as the *useful*, to be taken into the Ark for propagating their species. Now this Command, to take into the Ark Animals of every kind, the hurtful and destructive, as well as the useful, is a clear and convincing proof, that not only that Land where men inhabited, but those parts also where no men lived, (if any such places there were) but where the animals had extended themselves, were all equally involved in the Deluge; and that all the animals every where perished, as well as every man, those only excepted which were in the Ark.

6. There are many high hills and tracts of mountains in *Asia*, and as high hills as in any of the three Continents; now it is naturally impossible that the Waters could have ascended fifteen Cubits

above

above the high hills in *Asia*, without overflowing the other two Continents with it; for wherever there was a declivity, as there must be in their rising up to the top of the mountains, the waters would run off, and diffuse themselves on all sides, till they came to an equal surface every where, and so mount gradually and upon a level to the top of the hills. So that though *Asia* alone had been inhabited by mankind, and that Continent alone to be destroyed for man's sake; yet before the waters could have ascended fifteen Cubits above the highest hills there, the other two Continents must have been equally involved in the Inundation. If one Continent was to be overflowed to the height of the waters mentioned; the other two must of necessity have undergone the same fate, without a very great miracle.

7. But now as to the other part of this supposition, *viz.* That all the three Continents of the anciently known World, *Europe*, *Asia*, and *Africa*, might be involved in the Inundation, but not *America*. [" Or if we may suppose the Flood to have " extended over our whole Continent of the ancient- " ly known World, what reason would there be, " that in the opposite part of the Globe, *viz.* *Ame-* " *rica*, which we suppose to be unpeopled then, all " the living creatures should there be destroyed be- " cause Man had sinned in this? "] As to this extension of the Deluge to the three Continents of the anciently known World, I confess some of the preceding objections will not lie. For if all the anciently known World was to be inundated, then it behoved *Noah* to build an Ark for his preservation, and also to take in animals of every kind into it, that every species of God's creatures might be preserved to propagate again in the three Continents overflowed by the Waters, though *America* had not been subjected to the Deluge: but then the last objection will equally affect even this enlarged Scheme.

For

For tho' *America* lie upon the oppoſite ſide of the Globe, and be divided from the other Continents by vaſt Oceans on one ſide, and a tract of high mountains on the other, yet is the Earth in a manner ſpherical, and moreover turns round upon its *Axis* once in twenty-four hours; it is naturally impoſſible therefore that the waters could cover one ſide of the Globe to the height mentioned, and not fall off to the other, without a miracle, in any *partial* Deluge, whether leſs or more extended, and the greater the extent, ſo much the greater the miracle.

8. As to the objection formed againſt an Univerſal Deluge, from the ſeveral kinds of Animals in *America* not to be found in the other Continents, and which I take to be the main reaſon that induced our learned Author, *Mercator* and others, to believe that the Deluge had not extended to that Continent, it muſt be confeſſed to have its due weight, and to carry a conſiderable difficulty with it. But though we cannot pretend to anſwer it to ſatisfaction (as Dr. *Woodward* undertook to do) as not being yet furniſhed with proper materials for that purpoſe, ſince we neither know how or in what manner *America* is joined to the other Continents, nor how mankind came into theſe remote parts of the world; nevertheleſs, when we come to treat of the Animals in particular, we ſhall ſhew that this difficulty is not ſo great as at firſt ſight it appears. But though this objection ſhould yet ſtand in its full force, we have before proved that no partial Deluge could be effected without a miracle, and that no one Continent could be overflowed to the height mentioned but the Waters would diffuſe themſelves every where, and cover the whole Earth.

2. In the courſe of this Inquiry we ſhall produce as full and ſtrong evidences that *America* was ſubjected to the Deluge, as that any other part of the Earth was.

Theſe

These two points being sufficiently proved must needs over-rule and controul all objections to the contrary, and command our assent; and we must be contented to be ignorant of some things relating to *America*, as we must confess our ignorance in many other things, till Time and the Providence of God shall discover them.

The Reader may observe, that the main foundation of all the *narrow* Schemes of the Deluge is, the small number of mankind at the time. This we proceed next to enquire into, but several important points are first to be discussed; as, 1. The true length of the Antediluvian year. 2. The Longevity of the Antediluvians. 3. The Age or Duration of the World to the time of the Deluge. These material points being once ascertained, we shall then go on to calculate what number of mankind might probably be on the Earth when the Flood came, by which it will appear whether any small portion of it might be sufficient for their habitation.

CHAP. II.

Sect. I. *Of the true length of the* Antediluvian *Year, and of the Longevity of the* Antediluvians.

IF what Mr. *C*------ pretends be true, *viz.* "That "we are not yet certain what was the year of "those times, if it consisted of twelve months like "ours, if those months were of thirty or thirty one "days, those days of twenty-four hours, those "hours of sixty minutes, *&c.*" it would be in vain to investigate the proposition proposed in this Section. Had he, in treating of the ancient year of other nations, said, that we are not yet certain what the ancient year of the *Egyptians* or *Chaldeans* was, whether it consisted of one month or two, or of three

three or ſix or thirteen, he might have been warranted by the authors quoted below *, who were probably drawn into this opinion about the ancient years, from the extravagant numbers in the pretended *Egyptian* and *Chaldean* Hiſtories, in which (as they vied with one another for antiquity) they plainly ſeem to have deſigned to impoſe on the world, ſince they never mention by what years they reckoned, nor have we any other *criterion* by which to judge of them, than from the extravagant numbers of the one, and the more extravagant length of the *Seri*, *Neri*, and *Soſi* of the other, to reject them all for *impoſture*, except we ſhould reduce their years to days, as ſome contend for.

But now to pretend the ſame uncertainty in the *Moſaic* or *Scripture* account of years, can proceed from nothing but either a mere ignorance of the hiſtory, or a worſe principle, ſince the meaſure of the *Antediluvian* year is in ſo particular a manner aſcertained by the ſacred Writer, in the account he gives of the beginning and progreſſion of the *Deluge*, as to leave no room for any queſtion or doubt about it. The account in brief is this.

* Annum alii unum ætate determinabant, & alterum hyeme; alii quadripartitis temporibus, ſicut Arcades, quorum anni trimeſtras fuere, quidam Lunæ ſenis ut Ægyptii. Itaque apud eos aliqui & ſingula millia annorum vixiſſe produntur. *Plin. Hiſt. Nat. lib. 7.*

In Ægypto quidem antiquiſſimum ferunt annum bimeſtrem fuiſſe. Poſt deinde a Piſone rege quadrimeſtrem factum, noviſſimo ad tredecim menſes & dies quinque produxiſſe. *Cenſorinus.*

Cum traditum a veteribus eſſet, regnaſſe priſcos illos reges deoſque mille & ducentis annis ſingulos, fidemque ſumma non admitteret, pro certo habitum eſſe a pleriſque curſus lunares ſolaribus nondum plene inventis, annos confeciſſe. Ita mirabiles non erunt veteres fabulæ. Alios quatuor anni temporibus quatuor annos definiviſſe ſicut a nonnullis eſt Græcis ſactitatum— *Diodorus.*

Idem Author Chaldæis annos menſtruos olim fuiſſe perhibet.

" That

" That in the six hundredth year of *Noah*'s life, " in the *second* month, and on the seventeenth day " of that month, all the fountains of the great deep " were broken up, and the Windows of Heaven " were opened-----that the waters prevailed on " the Earth one hundred and fifty days-------- " that on the seventeenth day of the *seventh* " month the Ark rested on the mountains of *Ara-* " *rat*----that the waters decreased continually until " the *tenth* month-----that on the first day of the " *tenth* month the tops of the mountains were seen--- " that *Noah* waited forty days, and then sent out " first a *Raven*, and after seven days a *Dove*---after " seven days more he sent out the *Dove* a se- " cond time, which returned with an Olive leaf or " twig plucked off-----after other seven days he sent " out the *Dove* the third time, which returned no " more-----that on the first day of the *first* month, " and in *Noah*'s six hundred and first year, the face " of the ground was dry-----and finally, that on the " twenty-seventh day of the *second* month, the Earth " was so well dried, that *Noah* received a com- " mand to go forth of the Ark, and release all the " animals from their confinement."

Now in this very particular narration of the beginning, progress and ending of the Deluge we have days, months and years mentioned, *viz.* the first, the seventeenth, and twenty-seventh days of the month; also the first, the second, the seventh, and the tenth months, and the second month of the following year; and answerably to these, *Noah*'s six hundredth and sixty-first year. Could one then who had any regard to sincerity or truth make a serious question, whether the *Antediluvian* years were equal to our *weeks*, or whether their days measured the same time they do now? for which egregious *prevarication* or *trifling*, I leave him to the just

just resentment of those whom he imposed on by his pompous promises in his *Proposals*.

Hence it seems evident, that the *Antediluvian* year consisted of twelve months of thirty days each *; but still I think we are not come to the true measure of that ancient year. It is indeed the generally received opinion " that the *Antediluvian* year had three hun-
" dred and sixty days and no more, and that this
" period was then commensurate to the Luni-Solar
" year. But that since the Deluge some how or
" other, the case is altered; that whereas before,
" the Earth's *Axis* was parallel to the plane of the
" Ecliptic, by which there was a perpetual Spring,
" it is now oblique, and by the same means drawn
" from a *circular* Orbit round the Sun to an *Ellip-*
" *tical*. By this, or some other way we know not,
" the year becomes now lengthened to three hundred
" sixty-five days, five hours, and forty-nine mi-
" nutes-----that the *Egyptians* were the first who ob-
" served the Solar *tropical* year to consist of three
" hundred and sixty-five days, &c. (and that not
" till after the *Israelites* had left *Egypt*) and there-
" fore added five days more to the year, to which
" they tacked a ridiculous fable of *Mercury*'s playing
" at Dice with the Moon." Now though this be

* Which appears thus. The waters prevailed on the Earth for one hundred and fifty days, or five months of thirty days each, which reach from the seventeenth day of the second month, when the Flood began, to the seventeenth day of the seventh month. From that day the waters decreased till the first day of the tenth month. From thence forty days and twice seven reach to the twenty-fourth day of the eleventh month. In thirty-six days more, that is, on the first day of the first month of the year following, the ground began to be dry; but *Noah* continued yet fifty-seven days in the Ark, till the earth was not only dried but had produced herbage, plants and fruits for the sustenance of those men and animals who came out of the Ark, that is, until the twenty-seventh day of the second month, in *Noah*'s six hundred and first year, so that he was more than a year in the Ark. Thus it is evident that the *Antediluvian* year consisted of twelve months of thirty days each at least.

taken

taken for granted by the learned, I mean the different measure in the Solar *tropical* year in the Antediluvian World from the present, or from three hundred and sixty days to three hundred and sixty-five and odd hours, yet I am apt to think all this to be a mistake. For as Dr. *Woodward* in his Essay, Dr. *Bentley* in his *Boyle's Lectures*, and Dr. *Keil* more fully in his Examination of Dr. *Burnet*'s Theory, *&c.* have clearly shewn, that a perpetual Spring was so far from being better, that it would have been infinitely worse for the production of the fruits of the Earth, and that the position of the Earth was the very same, with respect to the *Ecliptic*, in that old World as it is at present, and its Orbit the same as now, not *Circular* but *Elliptical*; hence I think it will clearly follow, that the length or measure of the *Antediluvian* year was the very same that it is at present, *viz.* three hundred and sixty-five days and odd hours and minutes. Let us now see if we can produce any thing in confirmation of this opinion.

I observe that in several civilized nations they reckoned no more than three hundred and sixty days to the Civil year, and at the end thereof added five odd days by themselves.

Thus the *Persians* reckoned three hundred and sixty days in their year, and five odd days at the end thereof, as days of nothing, that is, no working days, but days of idleness and diversion. In *Abyssinia* they began the year with their Spring on the first of *September*, numbering twelve months in the year, in each thirty days, reckoning the odd days between *August* and *September* by themselves. The *Mexicans* in *America* divided the year into eighteen months, each consisting of twenty days, which make also three hundred and sixty in the year, and the five odd days were reckoned as days of nothing, during which the people did nothing, neither went to their temples, but spent the time in visiting each other;

the Sacrificers likewise ceased their sacrifices. The *Egytians* also had three hundred and sixty days in their year, and the five ἐπαγόμεναι or additional days by themselves. As for the European nations of *Italy*, *Germany*, *Gaul*, *Britain*, *Poland*, *Muscovy*, &c. we cannot tell how they reckoned, having no ancient Records or Histories to give us an Account of such things.

Now if *Persians*, *Egyptians*, *Ethiopians*, *Mexicans*, reckoned thus in the self-same manner, three hundred and sixty days to the year, and five odd days by themselves, whence could this custom of reckoning the year by equal months and odd days come in different nations, and distant parts of the World, as in *Asia*, *Africa* and *America*, in nations who had no correspondence with one another, but from one and the same Original? namely, from the sons of *Noah*, by whom the whole Earth was peopled, and from whom this manner of reckoning the days in the year with other common customs was derived to all their posterity? It must needs then be, that this manner of reckoning obtained also in the *Antediluvian* World. But if that be the Original of this custom, in reckoning the year and the odd days in the several parts of the World (and it will be difficult to assign any other reason for this uniformity) then it will follow, 1. That the *Antediluvian* year was of the same length with ours at present. 2. That the adding the five supplemental days was not the invention of the *Egyptians*, nor were they the first that discovered the true length of the year: that was known from the beginning as well as now, and the method of reckoning twelve months of thirty days, and five supplemental days at the end of the year, came to them as it did to other nations from the Parents of Mankind after the Deluge *. 3. That the variety of the length of the

* Hence it is easy to account for those several Customs and facts brought by Mr. *Allen* in Mr. *Whiston*'s Theory, and by Sir

the year in different nations pretended by several authors (as in the preceding note) is but a mistake. The *Chinese*, *Japanese*, and other nations in *India* divide the Year still by *Moons*, though their year be of the same length with ours; and as we divide the year by *months*, *quarters* and *half years*, so might other nations do the like, which Authors who wrote many ages after mistook for years. 4. That in the account of the Deluge, the five supplemental days at the end of the year come in their course, before the first day of the *first* month of the *second* year mentioned, after *Noah* had sent out the *Dove* the third time, so that *Noah* was a full year of three hundred and sixty-five days, and ten days more in the Ark from the beginning of the Flood.

If it should now be asked, how this method of dividing the year came to take place both before and after the Flood? I answer, because it was found to be convenient and an easy way of reckoning. It being much easier to reckon twelve equal months of thirty days, or with the *Mexicans* eighteen months of twenty days (who perhaps could not easily number to thirty, for such in *America* there were *) and add

Sir *Isaac Newton* in his Chronology, to prove that the Luni-solar year consisted only of three hundred and sixty days, before the just length of the Solar year was discovered by the *Egyptians*. For the *Post-diluvians* retaining the same manner with the *Ante-diluvians* of reckoning twelve months of thirty days each to the year, and the five odd days by themselves, as days of nothing; hence it came that what facts or customs were design'd to signify the number of days in the year, were accommodate only to twelve months of thirty days, neglecting the odd days as not of any account, being held for days of nothing. Thus the *Athenians* erected three hundred and sixty Statues to *Demetrius Phalereus*, *viz.* as many as there were days of account in the year, *i. e.* twelve times thirty.

* One of the *Missionaries* acquaints us, that some nations in *South-America*, along the River of *Guellaga*, are so dull that they cannot count any number. The most dexterous among them can reckon only to five, and many can go no farther than two. If they

add five days to the end of the year, than to reckon the months unequally as we do, ſome of thirty and others of thirty one days, which every one cannot ſo well remember. It ſeems pretty evident then, that the *Antediluvian* year was nothing ſhort of our own, and contained three hundred and ſixty-five days as ours does.

Having thus found the *Antediluvian* year to be of the ſame length with the preſent, no doubt can be made of the *Longevity* of the *Antediluvians*. In the courſe of a hiſtory wrote by the ſame perſon, the years muſt needs be ſuppoſed the ſame, or of equal length throughout the whole, when there is nothing ſaid to the contrary. But ſo far from this, that manifold abſurdities would follow, if we did not reckon the years to be what the Hiſtorian himſelf expreſly makes them. Should we reckon, for inſtance, a month for an *Antediluvian* year, as ſome have thought, ſeveral of the Patriarchs would have had children at five, ſeven, and nine years old. *Seth* would have been born when *Adam* was about ten years old, before which time *Cain* had ſlain his brother *Abel*, according to the Numbers in the *Hebrew*. Nor is the matter much mended, if we take the number of years as they ſtand in the *Septuagint*: We ſhall then have them fathers and heads of families at thirteen, fifteen, and ſeventeen years, above a hundred years too early for that ſtate of the world. At this rate alſo the eldeſt of *Noah*'s ſons could not have been above eight years old when the Flood

they would expreſs 3, 4 and 5, they will ſay, two and one, two and two, two two's and one; or to ſignify the number 5, they hold out the fingers of the right hand, if ten, the fingers of both. If the number they would expreſs ſurpaſſes ten, they ſit down on the ground and ſhew the toes of each foot, one after the other to ſignify twenty. The *Mexicans* then were expert Arithmeticians; who without the help of fingers or toes could reckon eighteen and twenty.——*Lettres Curieuſes, &c.* vol. 23 p. 314, &c.

came

came, the other two younger in proportion, very unable to assist in building the Ark, and yet all three married or espoused before they entered into it. On this supposition the old World had lasted but one hundred and eighty-eight years, according to the largest computation in the *Septuagint*, though it contained fourteen or fifteen generations from *Adam* to the Flood *, and yet since the age of man has been reduced to the present standard, fourteen generations would take up four hundred and twenty years, reckoning but thirty to a generation.

In like manner, if the years after the Flood had been no more than months, *Abraham*, who came into *Canaan* at seventy-five and married, had been but six years and three months old. *Isaac* married at forty had been but three years and four months, when he was not yet weaned. *Jacob*, who came into *Egypt* with seventy Children and Grand-children, had been only ten years and ten months old. And *Joseph* when made governour of *Egypt* at thirty, would have been but two years and six months, with other such absurdities. It appears clearly then, that throughout the whole history of *Genesis* the years are the same, of the length of which *Moses* gives an express detail by days, months and years in the relation of the Deluge. And as no question is made of the length of the years after the Flood, as little doubt or question can be made of the years before it.

Nor was the longevity of the first race of men unknown to the Gentiles. To this purpose *Josephus* reckons up the testimonies of *Manetho*, *Berosus*, and several more who wrote that the first men lived a thousand years †, and Mr. *Whiston* observes, that

* See this proved in the following Section.

† It seems needless here to mention that when *Josephus* and others speak of a thousand years, they take an even round number for a broken or unequal one, as is common, since none attained a thousand years compleat, though many lived above nine hundred.

had he been as well acquainted with the *Roman* Authors as with the *Greek*, he might have quoted many more, amongſt the reſt *Varro* accounted the moſt learned of the *Romans*; though he, comparing the life of man in his days with that of the firſt ages, could ſcarce think it poſſible that the human frame could have held out a thouſand years, and therefore ſuppoſed thoſe years to have conſiſted only of three months. But though the authors quoted by *Joſephus* are ſince periſhed, there is no doubt but that he truly reported what he found in them, ſince it is highly improbable he would otherwiſe have quoted their authorities, when it was ſo eaſy to convict him of falſhood, while theſe authors were in the hands of the learned.

Nor need this longevity of the firſt ages ſeem ſo ſtrange to us, ſince it is highly conſonant to reaſon that it ſhould be ſo. For as it pleaſed God to create but one man and one woman at firſt (and that for very good reaſons that may be given) by whom the whole Earth was to be peopled; had not men at firſt lived many hundred years, the greateſt part of the Earth had been for ſome thouſands of years uninhabited and a deſart, contrary to one end of man's creation, which was to be *fruitful and multiply and repleniſh the Earth.* The ſame Divine Wiſdom is conſpicuous in the new World: For when after the Deluge the Earth was to be peopled again, not by one, but by three pair (the Sons of *Noah*) the term of life was abridged one half, and as mankind multiplied, ſhortened gradually to two hundred and under, and finally by degrees to the preſent ſtandard. Had all men lived to the ſame age as they did at firſt, the Earth in its preſent ſtate could not have maintained them, as is well obſerved by the learned Mr. *Derham.*

But yet the reduction of man's life to the preſent general ſtandard, did not take place ſo ſoon as ſome imagine.

imagine. It is commonly thought that man's life was cut short to seventy and eighty years in the days of *Moses*, which opinion is grounded on an expression in the 90th Psalm, which has for its title, *A Prayer of* Moses *the man of God.* There it is said, *v.* 10. *The days of our years are threescore years and ten, and if by reason of strength, they be fourscore years, yet is their strength labour and sorrow, for it is soon cut off, and we flee away.* But this will be found no just foundation for this opinion. For 1. It does not seem at all probable that man's life was at this time reduced to seventy or eighty years. The *Israelites* are supposed to have been two hundred and fifteen years only in *Egypt*, to which if we add the greatest part of the forty years in the Wilderness, there will be from *Jacob*'s coming into *Egypt* to the time this *Psalm* was penned about two hundred and fifty. Now the reduction of man's life from one hundred and forty-seven (for *Jacob* died at that age) to seventy and eighty in two hundred and fifty years, seems too precipitate and sudden a change, whereas it appears to have been more gradual.

2. It does not appear to be true in fact, but much otherwise. For besides *Jacob* who lived one hundred and forty-seven, *Levi* his son attained one hundred and thirty-seven, *Kohath* one hundred and thirty-three, *Amram* one hundred and eighty-seven, *Aaron* one hundred and twenty-eight, *Moses* himself one hundred and twenty, and both these might have lived to a greater age had they been permitted to enter into the promised land; since it is said of *Moses* when he died, that *his eyes were not dim, nor his natural force abated*; and their sister *Miriam*, the eldest of the three, could not be less than one hundred and thirty when she died, since she must have been eight or ten years old when *Moses* was born, for she went to watch him when he was laid in the flags, and had the courage and presence of mind to address the

King's daughter and propose a *Hebrew* nurse for him. In the succeeding generations *Joshua* died at one hundred and ten, and *Caleb* must have been of the same or a greater age, for he was a prince or head of his tribe at their coming out of *Egypt*. And in the days of the Judges *Booz* and *Obed* must have reached above one hundred; and *Eli* was ninety-eight when he fell off his seat and broke his neck, who might otherwise have attained to an hundred. It was not till above four hundred years after their coming into *Canaan* that the present standard of seventy and eighty took place, for then we find *Barzillai* reckoning himself an old man at eighty, though he might live some years after, and *David* is reckoned to have died about seventy. It seems very evident then, that the fore-cited passage in the Psalm of *Moses* is not applicable to the common standard of life in that age of the world, but must be restrained to the state of the *Israelites* in the Wilderness, as their History and the whole tenor of the Psalm will shew. For the same is a prayer to God after the severe sentence had passed upon the people for their disobedience and refusal to enter and take possession of *Canaan*, upon the evil report of the spies; when God sware that they should not enter into the promised *Rest*, but that their children after them should; wherefore he made them turn back again into the Wilderness, where he kept them forty years, * till all

* This brings to my remembrance a passage that happened in conversation many years ago. A young Gentleman told the company that he had lately received a letter from a friend of his in *Turkey* wherein he wrote, that he had travelled from *Egypt* to *Jerusalem* in so many days (the precise number I have forgot) a journey which the *Israelites* were said to take forty years to perform, and then proceeded to ridicule the Scripture history. But one present soon took him up. Sir, said he, I suppose your friend did not make the journey on foot, and I'm afraid he forgot to take his Bible with him into *Turkey*, for had he consulted that,

all those who were rebellious died at the age here mentioned, not by the course of nature, but by the just judgment of God. This appears clearly from the 7th, 8th, and 9th verses preceding. *For we are consumed by thine anger, and by thy wrath are we troubled. Thou hast set our iniquities before thee, our secret sins in the light of thy countenance; For all our days are passed in thy wrath, we spend our years as a tale that is told.* *Moses* does not here then refer to the natural term of man's life, but to that period to which God had condemned the rebellious *Israelites*, by cutting their days short of the natural term in punishment of their sin.

But besides the reason now given with respect to the propagation of mankind, there was another, and that a moral reason for abridging man's years after the Flood. One great cause of the increasing corruption and wickedness of men in the old world was their *longevity*. Death was at a prodigious distance when life was prolonged to eight and nine hundred years and more. They lived as if they had been to live here for ever, and thought not of death. It does not appear that any visible judgment from Heaven had cut short their days before the natural term of life, till the *Deluge* came, which made them throw off all fear of God to follow their own corrupt affections. *Because sentence against an evil work is not executed speedily, the heart of the sons of men is wholly*

that, he might have found that their journeying days (besides their days of rest) were only about forty or so, though they travelled on foot with wives and children, cattle and all their household-stuff which they had to carry; and besides were not led the nearest way for fear of war, but made to fetch a Compass about. As for the forty years he harps on, it was the time of their continuance in the Wilderness, to which they were remanded back from the frontiers of *Canaan*, in punishment of their refusal to march into the promised Land, upon the evil report of the spies. Hence we may see how strangely Infidelity, through ignorance and supine negligence, imposes on itself.

set

set in them to do evil *. This seems to have been their case, no visible judgment had overtaken them, and therefore *their wickedness was great in the Earth, and every imagination of the thoughts of their hearts was only evil* †. As soon therefore as the repeopling of the Earth would permit it, the Divine Wisdom saw it meet to reduce man's life to a much shorter period (not all at once, but by degrees) that men might not as before flatter themselves with a life of ages, but that a nearer prospect of death might keep them in awe, and deter them from wickedness, especially from injustice, oppression and violence to acquire large possessions, when they had but a short time to enjoy them. But mankind has but little profited by this gracious design of the Almighty in thus abridging their days, since the same insatiable avarice and ambition of adding lands to lands and kingdoms to kingdoms have possessed the Sons of *Adam* to this day, notwithstanding the experience of so many ages might convince them of their folly, when the unjust and wicked means they have made use of, has defeated their own projects, and cut off their posterity from the Earth, as may be seen at large by this and most other nations of *Europe*, in that excellent preface which Sir *Walter Raleigh* has prefixed to his History. But what signifies mentioning history to those who are unacquainted with it? Princes and their Ministers dip not into such obsolete matters, they are ignorant of what passed in former ages, and know nothing but what has happened in their own, and do not live to see the fruitless issue of their own vain ambitious projects.

Man is in truth a compound of contradictions, he complains that his life is *short*, and yet that his time lies *heavy* upon his hands, because he knows not how to employ it usefully, or to any good purpose; he is desirous of *long* life, and yet by his follies, in-

* *Eccles.* viii. 11. † *Genes.* vi. 5.

emperance and debaucheries cuts the thread of life and sees not half his days; he has daily spectacles of mortality before his eyes, and yet never thinks of his own end.

The true length of the *Antediluvian* year, and the longevity of the *Antediluvians* being now ascertained, we proceed to enquire into the age of the World when the Deluge came.

SECT. II.

Of the Age or Duration of the World to the time of the Deluge.

AS there was no great difficulty in ascertaining the true length of the *Antediluvian* year, and the long lives of the *Antediluvians*, so as little, one would think, should there be in fixing the true age of the world when the Deluge came; since it is evident that *Moses*'s design in his history was not only to give an account of the Creation of the World and of Man, of the state of Innocence, the fall, and the promise of a Redeemer, with the destruction of the first race of men for their wickedness; but also to acquaint us with the world's beginning, and the time it had lasted, first to the Deluge, and then to the grand Epocha of the *Israelite* Deliverance. This he has done in a very clear and distinct method by recording, 1. The age of the first race of men at the birth of their sons, in a lineal descent from *Adam* to the sons of *Noah* before the Flood. 2. By giving the age of *Noah* at the Flood, and the age of the *Postdiluvian* Patriarchs at the birth of their sons from *Shem* to *Abraham*. 3. The age of *Abraham* at his coming into *Canaan*, and the number of years from thence to the delivery of his posterity from *Egypt*, and finally the forty years that elapsed from that *Egression* to their taking possession of *Canaan*. From these

theſe ſeveral dates thus preciſely marked by *Moſes*, one would expect that the *Chronology* in that long tract of time from the Creation to the Egreſſion of the *Iſraelites* from *Egypt*, ſhould be uncontroverted, bating ſome little difficulty in fixing the head or *Æra* of the four hundred and thirty years, that the poſterity of *Abraham* were to be ſtrangers, and in bondage in a Land that was not theirs.

Yet the *Chronology* of thoſe ancient times ſo clearly aſcertained by *Moſes*, is now rendered very doubtful, by reaſon of the diverſity of the numbers, in the Genitures of the Patriarchs in the three celebrated copies of the *Pentateuch*, *viz.* the *Hebrew*, the *Samaritan*, and the *Septuagint* Tranſlation, which has occaſioned great diſputes among the Learned. The *Samaritan* Copy making the number of years from the Creation to the Deluge no more than one thouſand three hundred and ſeven, but the *Hebrew* one thouſand ſix hundred and fifty-ſix, and the *Septuagint* reckoning two thouſand two hundred and ſixty two years to that period. The difference between the higheſt and loweſt of theſe computations is above nine hundred years, which muſt needs make a vaſt difference in the number of mankind upon the Earth at the time of the Deluge, the Point we are now in queſt of, in order to ſhew how much thoſe perſons are miſtaken who think mankind were but few in number at the time of the Deluge, and poſſeſſed but a ſmall part of the Earth. To enter into this perplexed controverſy of ancient chronology, and examine the ſeveral arguments of the contending parties would be too long a digreſſion in this place, which I therefore wave at preſent; and chooſe rather to lay before the reader ſuch *internal* arguments drawn from Scripture and the ſtate of nature, as may ſtrike ſome light into this intricate ſubject, and go a great way towards deciding the controverſy.

I. *Moſes*,

I. *Moses*, as I observed, gives the age of the World from the Creation to the Deluge, and from that period to his own time chiefly by *Generations*. A Generation is the interval of years between the births of father and son. This the Latins call *aetas*, and the Greeks γενέα. Now a Generation or the interval of years between father and son has not been, neither possibly could be, the same in all ages from the beginning, as *Vossius* justly observes; but has varied greatly according to the *length* or *brevity* of man's life in the several periods of the world *. Since man's life has been reduced to seventy and eighty years (though there be some instances every year of those that exceed that term and arrive at a hundred or more, yet these are very few in comparison, and only a small exception to the general rule) since Man's life, I say, has been abridged to seventy and eighty, the time of Puberty is in proportion to this *brevity* of life, and reckoned at twenty or twenty-one, which is the fourth part of a life of fourscore. The several stages of human life are infancy, childhood, youth, manhood, full age, declension, old or decrepit age; all which commonly bear a proportion to the whole term of life. Now the bounds and limits of these several stages cannot be precisely the same in all, but vary in respect of

* Quod itaque Herodoti γενέας sive aetates, quarum unaquæque constituit annos $33\frac{1}{3}$, accommodas ad aetates Patriarcharum, qui ante Abraham fuerant, in eo plurimum erras. Γενεαὶ antediluvium fuere duorum plus minus seculorum. A diluvio ad Abrahamum & Isaacum, dimidio ferme breviores sunt factae. Postea γενεαὶ fuere 60, dein 50, 40, & tandem denique 20 annorum. Itaque γενέα Græcis Grammaticis aliquando est spatium 20, aliquando 25, 30, 33, nonnunquam etiam plurium annorum; imo etiam 100 aliquando, uti est apud Theophrastum, vel etiam 110 annorum intervallum continet γενέα, ut docet Phlegon. Recte itaque notatum a Porphyrio. Quanto vetustiores tanto longiores esse γενέας. *Vossii Castigat. Hornii.*

Tanto serior fuit proportione pubertas, quanto vitæ totius major annositas. *Augustinus.*

the

the diſpoſition of men's bodies, their courſe of life, and alſo the places and ages in which they live. In the *Antediluvian* World then, when men lived to upward of eight hundred and nine hundred years, can it be thought that they paſſed through the ſeveral ſtages of life in as ſhort a time as men do now, who ſeldom exceed eighty, and not one in ten arrives at that age? But if the *Antediluvians* arrived at Puberty or manhood, as ſoon as men do now, then would the ſeveral ſtages of human life have been loſt or confounded, and men would have ſtarted from childhood to manhood at once, without any due or regular intervals, contrary to the order of nature. But if according to the preſent Oeconomy of nature, man is but a youth at twenty, which is a fourth part of our term of life, we may reaſonably conclude, there would be a ſuitable proportion of years in a much longer term of life, ſince Nature is conſtant and uniform in her operations. And though in ſo long a life as the *Antediluvians* enjoyed, the time of puberty might be a fifth or a ſixth part of their term of life, yet would they be but youths at an hundred and fifty or an hundred and ſixty, which bears much the ſame proportion to the whole of their life, as twenty is to that of ours. Hence then I infer, that to give the *Antediluvians* children at ninety, ſeventy, and ſixty-five as in the *Hebrew*, but much more at ſixty-five, ſixty-two, and fifty-three as in the *Samaritan* Genealogies, is much too early to agree with ſuch very long lives, and quite out of the order of nature; whereas the years aſſigned in the Genealogies of the *Septuagint* are more agreeable to the ſtate of nature in that firſt World; the intervals between the births of father and ſon, being *poſterior* to the time of puberty in thoſe long-lived Patriarchs. But in the others are by many years *prior* to it and premature *. The

* "I ſhould be glad to know (ſaith a learned friend) whether "you think there was the ſame proportion between the Matu-

rity

The age of puberty in the *Antediluvian* World being with good probability settled according to the order and Analogy of nature, let us next enquire into the number of generations from the Creation to the Flood. The received opinion is, that they are no more than ten, the first from *Adam* to *Seth*, the last from *Noah* to his sons *Shem*, *Ham* and *Japheth*. But here all our learned Chronologists and Critics who have hitherto treated of this subject, even *Vossius* himself, notwithstanding his great *acumen* in Criticism, have fallen into a very great mistake. It is true there are but eleven names in the Genealogies (whereof *Adam* is one) which constitute ten generations, and so indeed there were but ten in that line to the Flood. But then should they not have considered the great *void* of five hundred years between the birth of *Noah* and that of his three sons, which makes a large *gap* in the series of generations? We are not certain that *Noah* had no sons before those mentioned, but if he married at the usual time of puberty, and had children as early as others, he might have seen his Great Great Grandson above fifty years before the Flood came; so that there would be fourteen generations before the Flood, and a residue of years over towards the fifteenth, yea, perhaps fifteen compleat.

It may be thought that there would be a generation more in the line of *Cain*, since *Cain* would have a son ere *Seth* was born, and a grandson before *Seth*

" rity of the Understanding and the term of life, and why?" I believe there was. And the reason I think is given by that learned Physician Dr. *Smith* in his *Portraiture of Old Age.*—— " How often are persons in Scripture said to grow both in mind " and body, and eminently concerning our Lord, which is " *instar omnium.* He increased in Wisdom and Stature, and in " favour both with God and man. The Soul is as weak as the " Body, both at first and last. *Senes bis pueri,* is a known maxim " and daily experienced; and by all men understood of the " feeble Understanding."

had

had a ſon: And yet except the poſterity of *Cain* married earlier than the other deſcendants of *Adam* did, which probably they might, there would be no more generations in *Cain*'s line than in that of *Seth*. The reaſon is, that we cannot reckon the interval between *Adam* and *Cain*, which was but a few years, for a generation; and therefore the firſt generation in this line muſt be reckoned from *Cain* himſelf to his firſt-born *Enos*, as in the other line we reckon the firſt from *Adam* to *Seth*. The like number of generations there would be from *Abel*, whom we may well ſuppoſe married before he was ſlain by *Cain*.

But ſuppoſing that *Noah* had no other ſons but thoſe three that are named after he was five hundred, and that by Divine Providence his wife was till that time barren, for a reaſon that will be aſſigned hereafter, as in the caſe of *Abraham* and *Sarah*, yet *Lamech* the father of *Noah* had many other ſons and daughters, between one of whom and *Noah* there could be but a few years. The number of generations therefore upon the whole would be the very ſame in that firſt World, whether *Noah* had or had not any ſons *prior* to *Shem*, *Ham* and *Japheth*, that is fourteen generations at leaſt, if not fifteen compleat.

Let us now ſee what uſe may be made of this diſcovery of the number of generations before the Flood. Fourteen generations at the interval of one hundred and fifty years to a generation will make two thouſand one hundred years, and fifteen generations will amount to two thouſand two hundred and fifty; but at the interval of one hundred and ſixty years to a generation, fourteen will come to two thouſand two hundred and forty years, but fifteen generations at that interval would ariſe to two thouſand four hundred years. But now if, as has been ſaid, " That in the firſt ages of the world, both " before and after the Flood, men began to pro-

"pagate their kind as early, and indeed much ear-
"lier than they commonly do in our days," we shall presently see how well this fancy will agree with the number of generations. Taking the interval of generations in these last ages at a medium of thirty years, which I take to be the most general at present, fourteen generations at the interval of thirty years, make in all but four hundred and twenty, and fifteen generations no more than four hundred and fifty years. How many generations then must we have had at this rate to the Flood? And yet there were no more than fourteen generations with a residue of years over, and could be no more than fifteen at most. But let us now double this interval, and take sixty years to a generation. Fourteen generations at the interval of sixty years make but eight hundred and forty years, and fifteen generations no more than nine hundred. Nay take the distance of generations at eighty years, fifteen generations at that interval make but twelve hundred years; one hundred and seven years short of the very lowest computation of all, the *Samaritan.* Let us now set the interval of generations at one hundred years. Fourteen generations at one hundred years distance makes but one thousand four hundred years, and fifteen generations but one thousand five hundred years, that is, one hundred and fifty-six years short of the *Hebrew* computation of the World's duration to the Flood. But we cannot add another generation, being confined to the above-said numbers: Fourteen generations there surely were with a residue of years over, fifteen there might have been, but more there could not be.

Hence now it is evident how strangely and without-book those men talk, who fancy that in the first ages of the world men began to propagate their kind as early and even earlier than in these later ages? 2. How much reason we had to set the age of pu-

 berty

berty in the *Antediluvian* world at one hundred and fifty, or one hundred and ſixty years, ſince when ſet at one hundred years, it will not reach even to the *Hebrew* computation. And 3. That the years of the Generations in the *Septuagint* Tranſlation being more analogous to the ſtate of nature, and the age of puberty in the *Antediluvian* World, is a ſtrong preſumption that thoſe numbers come neareſt to the truth, and that the others fall far ſhort of it.

2. A ſecond argument is this. *Noah*'s eldeſt ſon was one hundred years old when the Flood came, the ſecond ninety-four, and the youngeſt eighty-eight, as I ſhall have occaſion to obſerve in another place; yet none of them had any children before the Flood, nor were they indeed married in the ſenſe we uſe the word now; for thoſe three wives who entered with them into the Ark were only affianced or eſpouſed ſome years before the Deluge, but the marriages not conſummated till ſome time after the Deluge. Hence I infer, that the ages of ninety and an hundred were not the ages of puberty in the old World, and therefore that it muſt be an error in the numbers to give ſome of the *Antediluvian* Patriarchs children at ſeventy and ſixty-five as in the *Hebrew*, a far greater ſtill, to have ſons born at ſixty-two and fifty-three as in the *Samaritan* copies. Nor

3. Is this other argument without its weight. If the *Antediluvians* continued to propagate their offspring till after they were five hundred years old, as we find *Noah* did, who was ſurely not the only one who did ſo, then they could never begin to marry and have children ſo early as men do now, no nor even at ſixty, eighty, or an hundred years, becauſe in that caſe parents would have been overburthened with the care and nurture of too numerous an iſſue, and the world had been overſtocked with inhabitants.

Let

Let us now go on to the ages after the Flood. After the Flood the life of man was by Divine Providence cut short one half and more for the first four generations; and after that by degrees abridged to three hundred, two hundred and under, none after *Terah* the father of *Abraham* reaching two hundred years. Now

1. If in the tenth and eleventh generation, when man's life did not reach to two hundred years, the age of puberty or marriage was not earlier than forty years, as we find by *Isaac* * and *Esau*, both married at that age, is it at all probable that when men lived to above four hundred, the age of puberty or marriage would have been so early as thirty-five, thirty, and twenty-nine, as the numbers stand in the *Hebrew* Copy? For naturally as the life of Man shortened, the age of puberty would be accelerated; and so it has by degrees, till it is advanced now to twenty or twenty-five. But in a life of four hundred years, the time of puberty would not be near so early as in a life under two hundred. The time of puberty or marriage in *Terah*'s days (who lived to two hundred and five) seems to have been at seventy years, and as we go farther back to lives of three hundred and four hundred would be still later. The intervals of the generations therefore as they stand in the *Hebrew* Copy, after the Flood, seem far too short of the truth, and are not agreeable to the state and order of nature. But here it will be objected, that the interval of generations being put in the *Septuagint* Translation at the distance of one hundred and thirty years or more, this must needs be as much too far back, as those in the *Hebrew* are supposed too early.

But this objection will be of no force if it be considered, 1. That supposing those in the Genealogies

* Tum Abraham Isaac filium juvenilis aetatis videns siquidem tunc quadragesimum annum agebat. *Sulp. Severus.*

were all of them the eldeſt ſons, there is no ſuch diſproportion here as is imagined. They had their firſt children we will ſuppoſe at one hundred and thirty, or one hundred and thirty-five, and lived (the three or rather four firſt, taking in *Cainan* with St. *Luke* and the *Septuagint*) to four hundred and ſixty, the next three to three hundred and thirty and three hundred and thirty nine. Now one hundred and thirty-five is not the third part of four hundred and ſixty, and not much above the third part of three hundred and thirty. And how many are there now that marry not till thirty, and yet few of them ſee three times thirty, or live to ninety; nay many of them do not exceed ſixty, or a few years more. There is therefore nothing uncommon here. We may rather ſuppoſe that the proportion between the time of marriage and the term of life has been much after this rate ſince the Flood, for we ſhall find few exceptions to the contrary. But 2. Why muſt we needs take it for granted, that all the names in the *Poſtdiluvian* Genealogies were the eldeſt ſons? I can find no proof of that, and it is eaſy to prove that ſome of them were not, even as the far greater part of the *Antediluvian* Patriarchs were in all probability not the firſt-born.

2. Another argument againſt the correctneſs of the *Hebrew* numbers in the *Poſtdiluvian* Genealogies is this. The longeſt generation there till we come to *Terah* is thirty-five years. Now at that ſhort diſtance between the births of father and ſon, how many Generations might *Shem*, *Arphaxad* and the ſucceeding Patriarchs have ſeen? No leſs than fourteen or fifteen. But ſuch a thing, as *Voſſius* again obſerves, is no ways credible, nor was there ever any man that lived to ſee ſuch a ſeries of generations from the Creation to this day. To make this appear evident we may obſerve, that no Language

has

has names for more than five degrees in generations of either ascent or descent *, and these formed on Nature and experience, as

Son.	Father.	Grandfather.	Great Grandfather.	Great Great Grandfather.
Fils.	Pere.	Grandpere Ayeul.	Bisayeul.	Trisayeul.
Filius.	Pater.	Avus.	Abavus. Atavus.	Proavus.
Υιὸς.	Πατὴρ.	Παππος.	Ἀπόπαππος.	Πρόπαππος.

Some few instances there are of those who have seen the fifth generation in a lineal descent from them, which with themselves make six in descent alive together. *Ludovicus Vives*, in his Notes on St. *Augustine de Civitate Dei* †, tells us of an old man in *Spain* who was the father of a whole village of near an hundred houses, the last generation whereof had no name by which to call him, the *Spanish* language ascending no higher than the *Proavus* or Great Great Grandfather. On a woman of the *Dalburg* family in *Bazil* the following Distich was made,

1 2 3 4
Mater ait Natæ dic Natæ filia Natam,
5 6
Ut moneat Natæ plangere Filiolam.

Of Mrs. *Honeywood* born in *Kent* in 1527, married at sixteen, and dying in the ninety third year of her age 1620, the same might be said, as it is in the *English* Distich.

1 2 3
Rise up Daughter and go to thy Daughter,
4 5 6
For her Daughter's Daughter hath a Daughter.

* The *Hebrew* has names for no more than father and son, and for remoter degrees, thy father's father, and son's son, &c.
† P. 820.

We have a like instance very lately of a Gentleman in *Cumberland*, who likewise saw five generations of his offspring before he died, at the age of ninety and above.

But such instances are so very rare that men have found no necessity to coin words for them. And if instances in the sixth descent are but very few, what probability is there of mens seeing more generations? *Vossius* therefore might well say, "That the "time of puberty is commonly the third or fourth "part of Human Life, rarely the fifth, and very "rarely the sixth; but if *Arphaxad*, *Sala* and *Heber* "had begun to propagate so early as they are made "to do in the *Hebrew*, they might have seen fifteen "generations descended from them, yea and possi-"bly the twentieth, since the intervals of genera-"tions were by little and little more and more con-"tracted. But it is absurd to think that any one "was ever so long present with his posterity."

The truth of this observation is further confirmed, by looking back to the generations before the Flood. To take the years even as they stand in the *Hebrew* Genealogies, *Adam* could see no more than eight generations by his son *Seth*, and but nine by *Cain*. But according to the LXX, and agreeably to the order of nature, *Adam* saw but five generations by his son *Seth*, and six by *Cain*, possibly seven. But then no other person in that old world could see so many, because *Cain* was but a few years younger than *Adam*. For *Seth* according to the LXX saw only five, and *Enos* the like number. And 'tis very probable that none of them lived to see more than five generations notwithstanding their *longevity*, because though their lives were long, they were so much the longer in coming to maturity. But after the Flood, as the term of life was immediately reduced to the half of what it had been before, and by degrees more and more abridged, *Ar*

phaxad,

phaxad, *Sala* and *Heber* would see but three generations, according to the LXX, if those named in the Genealogies were their eldest sons; but as that is no ways certain, and more probable that they were not, these Patriarchs might possibly have seen the fourth or fifth generation; but to have seen the tenth, twelfth, or fourteenth, as by the *Hebrew* numbers they must have seen, is by nature utterly impossible: And there is no need of having recourse to miracles on every occasion, when things may be accounted for in a natural way.

I might now rest the whole upon this single Point, which is alone sufficient to shew that there is an error in the *Hebrew* numbers; and if one instance can be produced of any Man since *Noah* that saw eight generations descended from him, I shall give up the cause. To offer the generations after the Flood according to the *Hebrew* (though herein contradicted both by the *Samaritan* and the LXX) as an instance, is begging the question. They cannot bring in as evidence that which is the matter in dispute. I have shewed from Nature and Experience that these cannot possibly be true, and hence form this demonstrative argument against them.

But besides this convincing proof taken from the number of generations, another argument may be brought from the state and circumstances of mankind at two remarkable periods, *viz.* The building of the tower of *Babel*, and the time of *Abraham*.

1. *Peleg*, or *Phalec*, had his name from *division*, for *in his days the Earth was divided*. *In his days*, according to some, must signify when he was born, or about the time of his birth, otherwise the name would not be peculiar to him more than others, for many others were alive at that time as well as he, of whom it might be as well said, that in their days the Earth was divided. But this is no necessary consequence; for his Name might be given him prophe-

tically, as the Names of *Noah* and *Methuselah* were; tho' the Separation might not happen till many years after. The Name thus given shews the dispersion to have been foreknown and predicted. And this sense the turn of Expression seems to require. This division of mankind into separate companies and nations, was after they had left off to build the Tower upon the confusion of Tongues, and some years they must have been occupied in the Building before their Separation. Now *Peleg* was born, according to the *Hebrew*, in the year after the Flood 101. But how utterly improbable is it, that in less than one hundred years mankind should be so increased from three couple as to set about so large and laborious a work, when they had several other necessary occupations to take up their thoughts and time? *Vossius* has calculated the number of mankind in the first hundred years after the Flood according to the great increase of the *Israelites* during their abode in *Egypt*, which was indeed extraordinary, and yet finds there would not be above two hundred persons; most of whom must needs be children. But supposing they had been all men grown, were these a sufficient number to build a City and a Tower whose top should reach to Heaven, *i. e.* be exceeding high, and that over and above all their other necessary affairs? But in truth so far were they from attempting such an arduous work in less than one hundred years, that they had not come into the Land of *Shinaar* till about four hundred years after the Flood.

I know not how all our modern Authors have taken it into their heads to suppose, that those who came into the Land of *Shinaar* were but a part of *Noah*'s posterity, who had left the father of mankind long before his death; and that others of them took another course, and went into *India* and *China*.

But what may not men believe when fancy is the

sole

sole ground of opinion? Not to insist that on this supposition they must multiply mankind in less than one hundred years at such a rate as is utterly incredible, and naturally impossible. Let it be considered

1. That *Noah* lived according to *Moses* three hundred and fifty years after the Flood. Now is it at all probable that any of his sons or grandsons would have left the father of the New World while he lived, without necessity? But what necessity could drive them to so unnatural a behaviour? Was the place they inhabited too strait for their small numbers? or too barren to afford maintenance to all of them, when the champaigne country of *Ararat*, as St. *Jerom* affirms, was exceeding fertile? Or could a small number quarrel about property who had all the world before them and in common? Or had they so soon forgot the destruction of the Old World that they could not live in peace and quietness under their ancient father?

2. But so far were they from being under any necessity to separate, that they were rather under a necessity to keep together, as for other reasons, so lest the Wild-Beasts of the field should be too many for them, since we find that after their coming into the plain of *Shinaar*, the hunting of them became a necessary employment, which gained *Nimrod* the character of a mighty Hunter.

3. When they came all together into *Shinaar*, many years after the death of *Noah*, they seem to have had no thoughts of separating at that time farther than the conveniency of tillage and pasture required, which was probably the reason of the resolution they took to build a very high tower (for that is all that is meant by a tower *whose top should reach to Heaven*) and advance it by degrees as need required, that it might be as a *beacon* to be seen in a large plain at many miles distance, and likewise be the

the center of Unity and common Assembly, where they might meet on publick and solemn occasions either of Religion or Civil affairs. Perhaps also to leave a monument to all future ages of that country to which mankind had first removed after leaving the place of their habitation at coming out of the Ark. But though there was no crime in this, it was highly inconvenient for mankind to keep so long together in one place, and therefore the Divine Wisdom saw it necessary to divide and disperse them, that they might the sooner and with less difficulty replenish the Earth, which by their continuing longer together would be so over-run with trees and shrubs, briars and thorns, that it would require both time and great labour to cultivate for man's use, as is now the case of the uncultivated lands in *America*. To this end he confounded their language or divided their tongues, (for it was he that first taught man speech) and this had the designed effect, obliging them to divide themselves, which otherwise, according to the common opinion, they had no intention to do *.

4. It

* But here I'm afraid is a mistake again. We read *Genes.* xi 4. thus. *And they said, Go to, let us build us a City and a Tower, whose top may reach unto Heaven, and let us make us a Name, lest we be scattered abroad upon the face of the whole Earth.* But the LXX. have it thus, ——— καὶ ποιήσωμεν ἑαυτοῖς ὄνομα πρὸ τοῦ διασπαρῆναι ἡμᾶς ἐπὶ προσώπου πάσης τῆς γῆς. —— *And let us make us a name* before *we be scattered abroad upon the face of the whole Earth.* This gives a very different reason for that enterprize of Mankind. According to our Translation, the design was to prevent their dispersion, that they might keep all together in one place. But surely this would have been a very foolish thought, and a thing impracticable, when their numbers increased, as in some generations more they must have done. But I have not so mean an opinion of the sense of mankind at that time. The reading of the LXX therefore gives the true reason. Not *lest* we should be scattered abroad, but *before* we be scattered abroad. That they must in time disperse, they could not possibly be ignorant, since they were to replenish the whole Earth.

4. It was necessary that mankind should continue with *Noah* while he lived, that they might be trained up under his instructions both in Religion and Policy. They had received a most peremptory Law against *Blood-shedding*, the crying sin of the Old World, and Magistracy was therefore to be instituted. Neither was this all, the Earth had suffered a great change by the Deluge, other kind of care and culture would now be required than what was before, and this set them upon the invention of new instruments for that purpose, as the plough,&c. Wine seems also to have been the invention of *Noah* after the Flood; vines and grapes they had no doubt in the former World, but not the art of pressing their juice to keep and make wine of: for had wine been in use before, it is very improbable that *Noah* would have been drunken with it. But he was at first ignorant of the strength of it, and so was inadvertently overtaken with it.

5. I do not see how *Moses* could have given the precise age of *Noah* at his death, nor the names of the several descendants of *Noah*, had not all his posterity come together to *Shinaar*. If a part of them only had come there, they could know nothing of those who had taken a different route. This he might have done, may they say, by Revelation, but what need of a Revelation in things that might be easily known by other means?

6. But what, I think, fully confutes this opinion is, the words of *Moses* himself, who after reckoning up the descendants of *Noah*'s sons adds, *These are the families of the sons of* Noah *after their generations in*

Earth. But while they kept together (which would have been longer than was convenient) they resolved to build a City and a Tower, as a Monument of that place to which Mankind had first removed, after leaving the Country where *Noah* the Parent of the New World, upon his coming out of the Ark, had lived and died, and also for the reasons above given.

their

their nations, and by these were the nations divided in Earth after the Flood *------*And the whole Earth* (i. e. all the men of the Earth) *was of one language and of one speech, and it came to pass as they journeyed from the East, that they found a plain in the land of Shinaar and dwelt there* †. Now who were they that journeyed? Were they not all the men of the Earth who were of one speech? And again----*So the Lord scattered them from thence-----because the Lord did there confound the language of all the Earth* (all mankind) *and from thence did he scatter them abroad upon the face of all the Earth* ‖. Hence it is plain that the language of all mankind was here confounded, and that from this place they were scattered over all the Earth.------- Therefore they were not divided nor separated before, of which there is not a syllable. All mankind then were here in one body.

That which may have given rise to this opinion is the credit they have given to Heathen Authors, who living many ages after the time of the transactions they relate, and having nothing but uncertain or fabulous accounts of them, make *Ninus* first, and *Semiramis* after to levy vast armies of some hundred thousands to conquer *India*, but were opposed by as great numbers, and a people better skilled in war §. Mere fables! The tenth part of the numbers they give them were far too many for those early days in which they place *Ninus* and *Semiramis*.

II. The

* Gen. x. 32. † Gen. xi. 1, 2. ‖ Gen. xi. 8.

§ *Semiramis* is said to have brought into the field against *Zoroastres* 1,700,000 footmen, 500,000 horsemen, 100,000 Chariots, and 200 Ships, as *Diodorus Siculus* relates out of *Ctesias*. Utterly incredible and impossible! In that Age in which they place *Semiramis*, there were not so many persons in the world, nor were horses used in war for many ages after. In the year 1699, the army which the Emperor of *Ethiopia* commanded against the Kings of *Galla* and *Changalla* (who had revolted from him) consisted of between 4 and 500,000 men. Now the Empire of *Ethiopia* comprehends a vast extent of Country, nor is there any Country

II. The other period I mentioned is that of *Abraham*'s coming into *Canaan.* He was then seventy-five years old, and born in the year of his father one hundred and thirty, as the best Chronologists allow, for he was not *Terah*'s eldest son. Now to this period, according to the numbers in the *Hebrew*, there were no more than four hundred and twenty-seven years from the Flood, thus,

From the Flood to the Birth of *Arphaxad*	2
To *Salah* - - - - - -	35
To *Heber* - - - - - -	30
To *Peleg* - - - - - -	34
To *Reu* - - - - - -	30
To *Serug* - - - - - -	32
To *Nahor* - - - - - -	30
To *Terah* - - - - - -	29
To *Abraham* - - - -	130
To his coming into *Canaan*	75
	427

Let us now take a view of the state of mankind as it is represented at that period. They had spread themselves far and wide in *Abraham*'s days, into many different countries, and were divided into many different nations; and though the several countries were not fully peopled, nor all the lands laid out in property, as is evident from this, that he with his nephew *Lot*, as well as his son and grandson afterwards, could find pasture for their numerous flocks and herds in *Canaan* without en-

Country whatever better peopled or more fertile. If in the very last Century then so large and populous a Country could raise on an emergent occasion between 4 and 500,000 men only (and that thought a very great Army too) how improbable and incredible is it, that *Ninus* or *Semiramis* could have raised in those early ages the hundredth part of the numbers this Author (*Ctesias*) gives them? 20 or 30,000 men had been a prodigious Army in those days.

croaching on the inhabitants, who had collected themſelves into cities, and occupied no more of the country than what lay contiguous to, and was convenient for them. Yet it is no leſs evident that there were many cities built, kingdoms erected, kings making war, ſubduing one another, and leading away the inhabitants captive. Now how highly improbable or rather impoſſible in the nature of things is it, that all theſe things ſhould have been tranſacted in the ſhort ſpace of four hundred and forty or four hundred and fifty years from the Flood, when all mankind ſprang from three couple only? eſpecially if what I have ſaid in the preceding argument be conſidered, *viz.* that the whole poſterity of *Noah* came not into the Land of *Shinaar* till near four hundred years after the Flood, namely, not till ſome time ofter *Noah*'s death, who lived three hundred and fifty years after it. To this purpoſe Sir *Walter Raleigh* obſerves,

" That if we look over all, and do not haſtily " ſatisfy our underſtandings with the firſt things " offered, and thereby being ſatiated, do ſlothfully " and drowſily ſit down, we ſhall find it more " agreeable rather to follow the reckoning of the " *Septuagint*, who according to ſome editions make " it above one thouſand and ſeventy-two years be- " tween the Flood and *Abraham*'s birth, than to " take away any part of the three hundred and fif- " ty-two years given. For if we adviſedly conſider " the ſtate and countenance of the world, ſuch as " it was in *Abraham*'s time, yea before *Abraham* was " born, we ſhall find that it were very ill done of " us, by following opinion without the guide of " reaſon, to pare the times over deeply between " *Abraham* and the Flood; becauſe in cutting them " too near the quick, the reputation of the whole " ſtory might perchance bleed thereby, were not " the teſtimony of the Scripture ſupreme, ſo as no

" objection can approach it [so he thought in his
" days, but times are now altered] and that we did
" not follow withal this precept of St. *Augustine*,
" that *wheresoever any one place of the Scriptures may*
" *be conceived disagreeing to the whole, the same is by*
" *ignorance of misinterpretation understood.* For in
" *Abraham*'s time all the then known parts of the
" world were peopled, all regions and countries
" had their kings, *Egypt* had many magnificent
" cities, and so had *Palestine* and all the bordering
" countries, yea all that part of the world besides
" as far as *India*, and those not built with sticks,
" but of hewn stone, and defended with walls and
" ramparts. Which magnificence needed a parent
" of more antiquity than those men have supposed.
" And therefore where the Scriptures are plainest,
" and best agreeable with reason and nature, to what
" end should we labour to beget doubts and scru-
" ples, or to draw all things into wonders and mar-
" vels, giving also strength thereby to common ca-
" villers, and occasion to those mens apish brains,
" who only bend their wits to find impossibilities
" and monsters in the story of the world and of
" mankind *."

All these arguments now laid together may serve to convince every unprejudiced person, that the numbers of years in the present *Hebrew* and *Samaritan* copies before the Flood, have been altered from what they were in the copies from which the Greek translation called the *Septuagint* was made. But at what time, and by whom and for what reason this change of the numbers was made, may perhaps be the subject of a distinct Inquiry. However, the arguments I have given are abundantly sufficient to justify me in reckoning the age of the world at the Flood according to the *Septuagint*: Which as some copies make it is two thousand two hundred

* History, part 1. book 2. chap. 1. sect. 7.

and

and forty-two years, but as others two thousand two hundred and sixty-two, or rather two thousand two hundred and fifty-six according to *Vossius*, by the correction of a small error in one of the numbers. We need not be so precise for a very few years, since in so long a tract of time, and after so many thousands of copies taken, it is not possible but that some errors, in numbers especially, must have crept in.

SECT. III.

Of the time allotted to the nursing of Infants in the first Ages of the World.

THE three previous questions, *viz.* 1. The true length of the *Antediluvian* year, 2. The longevity of the *Antediluvians*, and 3. The age of the world at the time of the Deluge being discussed and resolved, it may be expected that I should proceed to the main and important question which depended on the solution of them, *viz.* What number of mankind might probably be on the Earth before the Deluge came? But there is another point yet to be considered, that must necessarily be enquired into and determined ere we proceed farther; and that is, *What time might be allotted to the nursing of infants in the first ages of the World both before and after the Flood?* as one of these will lead us to the other. For till we can come at some certainty in this matter, we shall but bewilder ourselves, and multiply mankind at rovers, to the satisfaction of neither ourselves nor our readers. And what is thus inconsiderately built up, may easily be thrown down, since it stands upon no sure foundation.

This is a point the more necessary to be enquired into, as it has been in a manner wholly neglected by others who have treated of this subject, who measuring

suring the way of life in the first ages of the world by the manners and customs of their own times, have fallen into two gross and palpable errors, *viz.* 1. That in the first ages of the world, both before and after the Flood, men began to propagate their kind as early, and indeed much earlier than they commonly do at present. 2. That the children of the same father succeeded one after another as fast as they do now, that is, that the women brought forth children every year. The first of these errors we have already confuted in the preceding section, by shewing that the several periods or stages of man's life bear a just proportion to one another, and to the whole term of life; and that the period of puberty or maturity has not been the same at all times, but is according to the length or brevity of life in the different ages of the world, according to that remark of St. *Augustine. Tanto serior fuit proportione pubertas, quanto vitae totius major annositas.* The other is an error, one would think, they could never have fallen into, had they but once reflected, that every mother suckled her own children in those early days, and indeed where could she have found another to have done it for her?

That women suckled their children from the beginning, will, I think, not be disputed. It was for this end that nature, or rather the author of nature gave them milk in their breasts. In this respect women differ not from other *animals* who bear their young in the womb. The performance of this duty appears to have been an inviolable law for many ages, and still continues such in far the greatest part of the world. The *Greeks* a luxurious people, seem to have been among the first who began the *unnatural* custom of giving their children strange milk, and it is in *Europe* chiefly that it prevails among the rich and great, though the law equally binds all the sex. *Agellius* delivers a discourse of *Phavorinus* the philosopher

losopher against this unnatural custom, in order to prevail with his friend to make his wife nurse her own child. It is more than 1000 years ago, that both St. *Chrysostome* and St. *Gregory* inveighed against it in their public discourses, as our own Archbishop *Tillotson* pressed the duty in his time. But we may observe that St. *Chrysostome* did it at *Constantinople*, the *Metropolis* of the Empire, such being the places where corruption commonly begins; and St. *Gregory* says, *Prava autem in conjugatorum moribus consuetudo surrexit*; *an evil custom has crept into the manners of married people*, by which it would seem, that that unnatural custom had not been long in use in his time. I say not this, as if the suckling their children was a law incumbent on all women of what degree or quality soever, that could in no case or circumstance be dispensed with; but that it is a duty arising from the law of nature, and the order of God, being the method he thought fit to establish for the first nourishment of mankind, incumbent on all women, where there are not very strong reasons to the contrary *; as no doubt sometimes there may be.

I take it for granted then, that it was an universal custom for women to suckle their children as well before as after the Flood; but the question is, for how long time they continued nurses? This is of importance to the point in hand, and yet not easy to determine, because it is a thing rarely taken notice of by authors, so that we have but small light to guide us in our search. I find however in the book of *Maccabees*, that the courageous mother of the seven

* The duty of a mother's suckling her child is looked upon so indispensable in all the Islands of the *Sunde*, as *Java*, *Angonia*, *Balè*, *Madura*, *Zunda*, &c. that if a woman (especially if she be of quality) cannot suckle her child, she is obliged to have an authentic attestation of the true reasons of the nonperformance of the duty, as a very serious affair, and of the greatest importance to her honour. *Mendez Pinto.*

Martys (who in this particular may vie with the stoutest *Spartan* Ladies) to encourage her seventh son to suffer death for the law of his God, as his brethen before him had done, said, *O my son, have pity on me that bare thee nine months in my womb, and gave thee suck three years and nourished thee.*-----Again *Hannah* the mother of *Samuel* refused to go up to the yearly feast at *Shilo* with her husband, till she had weaned her son; and then she went up, and presented him before the Lord, and left him with *Heli* the High Priest, and *Samuel ministred before the Lord, being girded with a linen Ephod.*---- But she could not bring him at two or three years old to minister, for in that case, she must have left a nurse with him. If we go up yet higher to the times of *Abraham*, it is said of his son *Isaac*, *that the child grew and was weaned, and Abraham made a great feast the day that Isaac was weaned, and Sarah saw the son of Hagar the Egyptian mocking.* Here *Isaac* is said to have *grown* before he was weaned, that is, to have been some years old, as is probable from the fact mentioned, of *Ishmael*'s deriding him, and St. *Jerome* * acquaints us that both *Isaac* and *Samuel* were suckled

* Quando Isaac natus est, tredecim annorum erat Ismael et post oblactationem ejus, iste cum matre expellitur domo. Inter Hebraeos autem varia opinio est, asserentibus aliis, quinto anno ablactationis tempus statutum, aliis duodecimum annum vendicantibus. Nos igitur ut breviorem elegamus aetatem, post decem & octo annos Ismael suputavimus ejectum esse cum matre, & non convenire jam adolescenti, matris haesisse cervicibus. Verum est igitur illud Hebraeorum linguae idioma, quod omnis filius ad comparationem parentum infans vocetur & parvulus: nec miremur barbaram linguam habere proprietates suas. cum hodieque Romae omnes filii vocentur infantes. *Hieron.*

I have transcribed the whole passage to shew that *Ishmael* was not such a child when he was sent away with his mother, but a lad of 18 years.

Twelve years nursing would have been somewhat of the longest even in the *Antediluvian* World, but this is one of the least of the extravagant opinions of the *Rabbins*: And yet *Purchas* relates

ſuckled five years, according to the opinion of ſome Jews, but much longer according to others. But theſe three caſes are ſingular, and no general rule can be drawn from them. *Sarah* expected no more children, the one ſhe had being out of the courſe of nature, and the *Heir* of the Promiſe, of whom as ſhe was very fond, ſhe might nurſe him the longer. *Samuel* again, according to his mother's vow, was to be offered to the Lord, as ſoon as he was capable of doing any little ſervice in the Tabernacle, till which time ſhe ſuckled him; and the mother of the ſeven martyrs might become a widow ſoon after the birth of her ſeventh ſon, whom therefore ſhe nurſed the longer, as he was her laſt; three years being, I ſuppoſe, too long for the common time of nurſing in that age of the world.

But there is another inſtance in the early times which does not appear to have any ſingularity in it, and it is that of *Moſes* himſelf. We have only three children named of his father *Amram*, viz. *Miriam*, *Aaron* and *Moſes*. *Miriam* the daughter, 'tis evident, was the eldeſt, *Aaron* was three years and perhaps a few months older than *Moſes*. If theſe two brothers ſucceeded one another, as ſoon as the ordinary time of nurſing would allow, then in that age, while the *Iſraelites* ſojourned in *Egypt*, the common time of nurſing was two years. Now if when man's life was reduced to 130 or 140 years (for *Kohath* the grandfather lived to 133, and *Amram* the father of *Moſes* to 137) the ordinary time of nurſing was two years, then I think we may reaſonably infer that for three or four generations after the Flood, when men lived to above 400 years, the time would be ſo much longer in proportion, and would not be leſs than

lates, that in ſome parts of *Florida*, the women ſuckle their children till they be 12 years old, and able to get food for themſelves, which they did becauſe of the Famine in thoſe parts, whereby they would otherwiſe have died.

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three or four years; and consequently that before the Flood, when life was protracted to 8 or 900 years, it would be still longer, in proportion to their longevity; so that five years might be the ordinary time of nursing in the Old World; and therefore that we cannot reckon less than six years between the births. For man's life being prolonged to so many hundred years at first for the more speedy peopling of the Earth, he came by slow degrees to mature age, there being a long time required to rear up a body that was to last near 1000 years. The intervals therefore of infancy, childhood, youth and mature age, were so much longer in proportion to ours, as the difference is between our term of life and theirs; and 150 or 160 years, with respect to their longevity, was no more in proportion than 20 is to the brevity of our life. As the *Antediluvians* therefore were so very long in growing up to mature age, I conclude that the time of nursing could not be shorter than five years, and that the distance between the births in a regular way must be set at six years.

Now though the time here given to nursing, upon which the *interval* between the births depends, be agreeable to the state of nature in the first ages of the World, yet that it may not be thought an opinion extravagant as it is uncommon, I shall bring a proof that the distance between the births was in fact the same as I have here supposed it to be.

In *Genesis* x. 22. *Moses* records the children of *Shem* thus: *The children of Shem; Elam and Ashur and Arphaxad, and Lud and Aram.* The very same order in ranking them is also observed in 1 *Chron.* i. 17. *The sons of Shem; Elam and Ashur and Arphaxad and Lud and Aram.* Hence it appears that *Arphaxad* was not the eldest son of *Shem* but the third; and yet in *Genes.* xi. 10. (where *Moses* gives the line of *Arphaxad* to *Abraham*, not as the eldest son of

Shem, but as the progenitor of *Abraham*) it ſtands in all the preſent copies *Hebrew*, *Samaritan* and *Septuagint* thus, *Shem was* 100 *years old and begat Arphaxad two years after the Flood.* But the number *two* here is evidently an error in all the copies, for *Arphaxad* could not be born two years after the Flood, except he had been *Shem*'s eldeſt ſon, which it is plain from the fore-cited texts he was not, but the third only. Two years after the Flood was as ſoon as we can well ſuppoſe the *firſt* ſon born.

But now *Joſephus*, who affirms that the ages of the Patriarchs were exactly ſet down in the Sacred Books, from which he inſerted them faithfully into his Hiſtory, has the year of *Arphaxad*'s birth agreeably to the order of *Shem*'s ſons in the fore-cited texts. *Shem the ſon, of* 100 *years, begat Arphaxad* 12 *years after the Flood.* The number 12 here given is apparently the right number, *Arphaxad* being the third ſon; and thus it ſeems it ſtood in the copies in the time of *Joſephus*. And from the number thus corrected, I am able to make the following obſervations.

1. This gives us the true age of *Shem* at the Flood, *viz.* 88, for he was 100 years old 12 years after it, the Flood came in the year of *Noah* 600, conſequently he was born in the year of *Noah* 512.

2. This reſtoring the right number 12 inſtead of 2, ſerves to decide an old controverſy concerning the natural order or ſeniority of *Noah*'s ſons. *Geneſ.* x. 21. we tranſlate thus, *Unto Shem alſo the father of all the children of Heber, the brother of Japhet the elder, even to him were children born*, and to the ſame purpoſe *Junius* and others. But the Vulgate renders the verſe thus. *De Sem quoque nati ſunt, patre omnium filiorum Heber, fratre Japheth majore----* and to the ſame purpoſe *Caſtalio* and others. The *Hebrew* is here it ſeems equivocal, and may be rendered either way. But the *Greek* verſion is not ſo,

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which has it thus. Καὶ Ἰῶ Σὴμ ἐγεννήθη καὶ αὐτῷ παῖδι πάντων Ἰῶν υἱῶν Αβερ ἀδελφῶ Ιαφεθ Ἰοῦ μείξονος. This decides the eldership for *Japheth*; and the age of *Shem* 12 years after the Flood, *viz.* 100, does as clearly make him the youngest, consequently *Ham* was the second * contrary to what is commonly believed. And that this is the true order of their seniority is confirmed by *Moses* in *Genes.* x. who naming the descendants of the sons of *Noah*, first of all sets down *Japheth* and his sons, in the second place *Ham* and his children, and those of *Shem* in the last place. The same order is also observed by the author of the first book of *Chronicles* chap. i. In both these places the sons of *Noah* are without doubt ranked according to the order of their births, though for other reasons where they are barely named, they † are placed otherwise, the youngest first, and the eldest last. The same inversion of names is made in the sons of *Terah*, *Abraham*, *Nahor* and *Haran*, the eldest placed last, and the youngest named first. We have something like this in the case of *Solomon*. By 2 *Sam.* xii. 24. it

* *Junius* in *Genes.* ix. 24. makes *Ham* to be *filius natu minimus*; but the LXX have it, ὁ υἱὸς αὐτῦ ὁ νεώτερος, i. e. *junior*, not νεώτατος, *ultimus vel natu minimus*; and so our Translators well, his younger son, that is, the second (for he had but three) not his youngest.

† Commentators observe that there are three different manners of ranking names or persons in Scripture, *viz.* natural, personal and historical. 1 According to the order of their birth. 2. According to their eminent worth; but 3. sometimes that person is named last whose story is to be continued. *Scaliger* asserts that they are always reckoned according to the order of their birth, but this is evidently a mistake, for why are they ranked in a different order in different places, but for the reason here assigned? sometimes according to the order of nature, at other times according to their eminency in piety or civil life. But in the forecited chapters of *Genes.* and *Chron. Shem* cannot be reckoned last for the third reason, because the history is there broke off, and another subject assumed, *viz.* The building of *Babel*, confusion of tongues and dispersion, after which *Moses* returns to the line of *Shem* from *Arphaxad* to *Abraham*.

would ſeem that *Solomon* was *David*'s eldeſt ſon by *Bathſheba* after his repentance and the pardon of his ſin granted, and yet he was but the fourth and the youngeſt of all his ſons, as appears from 1 *Chron.* iii. 5. *And theſe were born unto him in Jeruſalem, Shimea and Shobab and Nathan and Solomon, four, of Bathſheba the daughter of Ammiel.* But which is more immediately to our purpoſe,

3. This correction of the number gives us the true diſtance or Interval between the births in the *Antediluvian* world, in the firſt place. *Japhet* the eldeſt ſon was born when *Noah* was 500, that is, when he entered on the year of his life 500. *Shem* the third, when he was 512. There are then 12 years between the eldeſt and the youngeſt of the three. The ſecond ſon *Ham* we may well ſuppoſe born about the middle of theſe 12 years, that is, in the year of *Noah* 506. And thus we have the interval of 6 years between the births, as I conjectured it would be in that firſt world.

4. This gives us alſo the interval between the births in the new world, or immediately after the Flood. I do not ſuppoſe any children were born till two years after coming out of the Ark. My reaſon is, that a full year of ſorrow and trouble, of care, toil and confinement in the Ark, would indiſpoſe them for generation for ſome ſhort time, neither yet had either ſex attained the age of *puberty* of their fathers: but after a year they might be pretty well recovered both in body and mind, and ſo tolerably ſettled in the new world, that the women might conceive and nurſe their children without inconvenience. Now here we have but three ſons of *Shem* in 12 years after the Flood; the eldeſt we may ſuppoſe born at two, the ſecond at ſeven, and the third at 12, at the diſtance of five years between the births, and the time of nurſing about four, as I before judged it probable. For here too, as well as at the beginning, I ſup-

I suppose no daughters born at first, but sons, the reason of which will appear hereafter.

5. We may from hence also assign the several ages of *Noah*'s sons when the Flood came, *viz. Japhet* the eldest 100, *Ham* the second 94, and *Shem* the youngest 88; though there may be some doubt as to the precise age of *Shem*, because it seems uncertain what is the precise meaning of 2 or 12 years after the Flood, whether it be after it began or after it ended. Chronologists generally reckon from the time the Flood began, but I think it more reasonable to take the meaning to be from the time it ended, and the new world began, otherwise there is a year lost in the Chronology from the Creation, and the year of the destruction of the old world is not reckoned. If the expression is to be understood in this last sense, then was *Shem* but 87 when the Flood began, and 88 when it ended. And this proves the ages of *Noah*'s sons to be the same that I gave them in the preceding section.

The subject we have been treating of in this section may seem too trifling to some. But, 1. That can be no trifling matter in itself, which is amongst the first laws of nature, and the method which the Creator established for the first nourishment of those whom he made in his own image. 2. It is the principal thing that must guide us in our search after the number of mankind at the Deluge, and moreover shews what a slow progression there must have been in the peopling of the earth after it, which utterly subverts the common computation of time. 3. It serves to shew the great mistakes of those who have entirely neglected this consideration in their calculations. Those Gentlemen however whom we oppose in their narrow schemes of the Deluge, must acknowledge that we are exceeding favourable to them in this particular, since we hereby give them

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an advantage which poſſibly they never dreamt of, though it will be found to do them little ſervice in the end.

SECT. IV.

Some general Remarks concerning the increaſe of the Antediluvians; *and the argument of* Voſſius *for the paucity of mankind at the Deluge refuted.*

HAVING now upon pretty ſure grounds aſcertained the time allotted to the nurſing of infants in the old world, we proceed to enquire what might probably be the number of mankind at the time of the Deluge, ſtill keeping in our eye the due diſtance of ſix years between the births; but firſt we will premiſe a few general remarks that may ſtrike ſome light upon our preſent Inquiry. Let it be obſerved then,

1. That the firſt parents of mankind were created perfect man and woman at once, and might have had their firſt-born in a very few years after their Creation.

2. That though no children are mentioned but *Cain* and *Abel* till the birth of *Seth* in *Adam*'s 230th year, according to the LXX (whoſe computations we are henceforth to follow) we are not thence to conclude, that there were no children between; no reaſon obliging us ſo to think. There were probably a good many at the proper diſtances between the births: It is certain that *Adam* had ſeveral ſons and daughters after the birth of *Seth*, and what ſhould put a ſtop to his propagating mankind for more than a 100 or 200 years before it? I have often wondered that authors who treat of this ſubject, ſhould only reckon upon the deſcendants of *Cain* and *Seth* for peopling the Earth. What became

became then of all the other sons and daughters of *Adam?* It was not therefore by the issue of *Cain* and *Seth* alone that mankind was increased, but by all the other sons and daughters of *Adam*, whom he had both before and after the birth of *Seth*. Nay *Abel* might have had children before he was slain by his brother.

3. That though the sons of *Noah* born before the Flood were but the tenth names in a lineal descent from *Adam* by his son *Seth*, yet there were really 14 generations at least if not 15 to the Flood, as I have before proved. For *Cain* being banished from the Divine Presence or place of worship, and having no more Converse with the Deity, which others enjoyed, his posterity being more immersed in earthly things might marry earlier than the righteous descendants of *Adam*, particularly by *Seth*, whose offspring neither before nor after the Flood seem to have been very hasty in that matter. So that there might very well be 15 generations from *Cain* himself as the Head, exclusive of *Adam* in the reckoning, but more I think there could not be.

Not to insist that *Lamech*, one of that line, had two wives in which he might not be singular; tho' that practice would in great measure depend on the order of Providence; for if more females were born than males, that would very likely be the case of many, otherwise not.

4. That we need not suppose that the persons named in the Genealogies were all of them eldest sons. Those indeed who were born in the 162d, or 165th year of their father might be so, but not those born in the 187, 188, or 205th of their father's age. But these only are named because *Noah* the father of the new world reckoned his pedigree from them.

5. That though they were late in having children, because it was long ere they arrived at maturity, not marrying till they were 150 or 160, yet they continued

nued to have iſſue for ſome hundred years. *Noah* was 500 years old, before he had any of the three ſons, by whom the new world was peopled. What a numerous progeny might each of them have had therefore, when from 150 or 160 they continued to beget children till they were above 500?

6. That by reaſon of their great longevity, all that were born in any one Century were cotemporary for 8 or 900 years, which muſt prodigiouſly increaſe the number of mankind upon the earth at a time. Thus ſhould we ſuppoſe all that were born in and about the year 1600 of the Chriſtian *Æra* to have been alive at the year 1700 only, how vaſtly more numerous in that caſe would mankind have been than in fact it was? when of ſome millions born at the firſt of theſe periods, but a few perſons might be alive at the laſt of them: whereas the *Antediluvians* were cotemporary not only for one hundred, but for 8 or 900 years, and a new brood every year ariſing.

7. That as the birth of Twins is not ſo very rare even in our days, it might probably be more frequent at firſt, when human nature was vigorous and healthful, as by their long lives appears. This we may ſuppoſe, without crediting the *Jewiſh* fable, that *Eve* brought forth twins of different ſexes at a birth, and that *Cain* married *Abel*'s ſiſter, and *Abel Cain*'s. For the ſame reaſon alſo, *viz.* the ſtrength and healthineſs of that primitive conſtitution and the long time of nurſing, we may reaſonably ſuppoſe that few children died in their infancy, whereas now numbers do every year.

Now from theſe general obſervations, we may perceive how weak the argument of *Voſſius* is for the *paucity* of mankind at the Deluge. "How ſlow and "ſluggiſh mankind were in propagating the human "race, ſays he, is evident from hence, that *Noah* "was but the ninth in a lineal deſcent from *Adam*."

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But what does this instance really prove? It proves indeed that men lived to a very great age, when 10 persons (for here we must include *Adam*) or rather as we have proved, 14 or 15 persons could reach beyond 2000 years; but as to the purpose he brings it for, it proves the very contrary: for if men lived to 8 and 900 years, and continued to have children for 340 or 360 years of that time, the increase of mankind must needs be vastly great.

Again he adds, "that whoever will compute "rightly, will find that many more persons might "have descended from the eight who escaped the "Deluge to the time of the dispersion of the seve-"ral nations, than could have proceeded from *Adam* "alone in the space of 2000 years." How he made his computation he tells us not, but on examination it will appear that never was a man more out in his reckoning; not even *Hornius* himself, whom he so smartly rallies on his computations after the Flood; and indeed poor *Hornius* it seems had made a grievous mistake; for he had made all his numerous Postdiluvians *males*, quite forgetting that *females* were no less necessary for propagating mankind. But let us now shew *Vossius* mistaken in his turn.

1. Instead of eight there were but six persons to propagate mankind after the Deluge. *Noah* was 600 years old when the Flood came, and 'tis not probable that the *Antediluvians* had children after the age of 600, at least I shall reckon upon none such, because I find no instance of it, and besides am sure that *Noah* had not; since *Moses* expressly says, that of those three sons that were with him in the Ark, all the nations of the earth were descended. *These are the three sons of* Noah, *and of them was the whole Earth overspread* *.

* *Genes.* ix. 19.

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2. The difference in the term of life is to be considered, the longeſt life after the Flood was 465, the longeſt before it 969, above double the term, and the number of years for propagation in each is in proportion to the term of life. The *Antediluvians* had children from 150 or 160 to above 500, or for about 350 years of their life, whereas the life of the *Poſtdiluvians* did not much exceed 400 in all. But

3. Let us conſider the vaſt diſproportion of Time in the two periods compared. From the Creation to the Deluge there were 2256 years; from the Deluge to the Diſperſion about 531 years (reckoning both periods according to *Voſſius* himſelf and the *Septuagint*) the difference is no leſs than 1725 years, which the firſt of theſe periods had more than the laſt. Let us however ſet aſide the firſt 500 years after the Creation, when the Increaſe of mankind could be but ſmall, there ſtill remains an exceſs of 1225 years on the ſide of the *Antediluvians*. Now could three pair in 531 years have more increaſe than thirty times three pair at leaſt in 1225 years, though the term of life had been equal in both? Utterly impoſſible! though the women after the Flood had brought forth 10 and 12 at a birth *.

* ——It is too haſtily concluded, that in the Period of 1656, or as the *Septuagint* whom he (*Voſſius*) follows, 2256, between the Creation and the Flood, that only *Paleſtine*, *Syria* or *Meſopotamia* were inhabited: For conſidering the Longevity of men in that Period, a ſmall ſkill in arithmetical Calculation will render the number of coexiſting Inhabitants of the Earth more than ſix times as many as would have happened in 5000 years, when mens ages were abridged to that ordinary dimenſion which now they have.—— Sir *Matthew Hale*'s Origination of Mankind, *p.* 188.

CHAP.

CHAP. III.

Sect. I. *An equitable calculation of the great increase of mankind before the Deluge.*

HAVING shewed how exceedingly mistaken *Vossius* was in his computation of the number of mankind before the Deluge, I shall now endeavour with much greater probability of truth, to calculate the numbers in the *Antediluvian* world; in which though we can arrive at no certainty, as was observed by the learned Bp. *Stillingfleet*, we shall yet build upon grounds certain and undeniable. We will first compute what number upon the whole might be *born* into the world from the Creation to near the time of the Deluge, and then 2dly, make the needful deductions for *deaths* and other deficiencies.

1. How long the parents of mankind continued in *Paradise* * we know not, though longer perhaps than is

* Though the time of *Adam* and *Eve*'s continuance in their first state, that of *Innocence*, is not mentioned, yet it is reasonable to think their *fall* was not immediate, it not being consistent with the Divine Wisdom and Goodness to expose them to a temptation (notwithstanding the warning given) before they had time to reflect or well know their state and condition. On the other hand it could not be many years, considering the command given them to increase and multiply and replenish the earth, and that *Cain* was not conceived till after their being expelled *Paradise*. I have therefore supposed them to have been two or three years in *Paradise*, and have given them the like number to lament their *fall* and degraded condition, ere they could think to increase the number of the unhappy. This seems far more probable than the opinion of those who suppose them to have fallen immediately, or in a very little time after their Creation, for no other reason I can think of, than that the account of the *fall* immediately follows the history of the Creation, whence they conclude that little or no time had intervened between them. Nay so ridiculous is the opinion of some writers (who herein follow the *Reveries*

is commonly imagined. We ſhall ſuppoſe two or three years, in which time there was no child born, nor any attempt towards it. We ſhall allow them two or three years more to lament their *fall*, and the miſerable eſtate their want of *faith* and diſobedience had brought them to, from a moſt happy condition; and ſuppoſe *Cain* to be born ſix years after the Creation (in which ſuppoſition few, I believe, will be apt to think us too haſty) and *Abel* again ſix years after him, and ſo every ſixth year *Eve* to have had a child, the firſt ſeven, eight or nine whereof were probably all *males* (the *males* being longer in coming to maturity than the *females*) and this diſtance between the births, I ſuppoſe, will alſo be thought a ſufficient allowance. At this rate of increaſe *Adam* would have in 100 years 16 children, in 200 years 32, and in 400 years 64 children; when we will ſuppoſe *Eve* to have left off child-bearing. Nor need this number of *Adam*'s children be thought too great, when there are inſtances in theſe later ages, and this ſhort period of man's life, of thoſe who have had 40 children at ſingle births by two ſucceſſive wives, and of many others who have had 20, 25 and 30 by one wife, though in ſuch caſes it is not to be ſuppoſed that the women ſuckled their children.

2. Though it is reaſonable to think that the *Antediluvians*, notwithſtanding their longevity, came to mature age at 150, yet as we are not ſure that they all married ſo ſoon as they were ripe for marriage, and that the earlieſt in the Genealogies is born in the 162d year of his father, who might probably be a firſt-born, I will not ſuppoſe *Cain*, *Abel*, or any of

Reveries of ſome of the *Rabbins*) that they ſuppoſe *Adam* and *Eve* to have fallen on the day of their Creation, and yet allow them created in the evening only of that day. I think it may admit a debate whether *Eve* was formed out of *Adam* on the ſixth day.

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the succeeding children or grandchildren of *Adam* to have married till they were 160, but to have had children from 161 or 162 till they were of the age of 500, at the fore-named distance or interval between the births; though *Noah* we know had three sons after he was 500 at the due intervals. And to all the *Antediluvians* we may allow, without fear of exceeding, 50 or 54 children in general, according to the course of nature, and the longevity of those first ages of the world.

3. Let us next enquire in what number of years the men of that world might double themselves, notwithstanding the long interval between the births. The increase indeed will be found very small for the first three or four hundred years, as they were late in coming to maturity, but the succeeding ages will swell the account exceedingly. Let us suppose at present (what we shall prove afterwards) that in the year of the world 500 there were 200 persons only, male and female, of full age to marry, the men at 160, the women at 120 or thereabout. The first or second year after the marriage will probably produce 100 births from 100 couple, and every sixth year after 100 more. At this slow progression the 200 married persons will in 19 or 20 years be increased to 600. So that the number of mankind would be trebled in 20 years, after there came 100 pair to be married. And in this manner they would increase and multiply every 20 years, or in that space treble themselves.

It may perhaps be objected, that though it appears that such an increase might be at first from the first 100 marriages, yet they could not continue thus to multiply at such periods, because according to the rule we have laid down, none of the issue of these 100 first marriages could increase the number of mankind, till the men had attained the age of 160. 'Tis true they could not, but then it must

be remembred, that the firſt 100 pair are ſtill adding every ſixth year 100 more to the number of mankind, even till after the 400 born in the firſt 20 years are married, and begin a new ſtock for increaſe, ſo that when there came to be ſome hundred couples married, the increaſe and multiplication would come on very faſt, and in 1000 years mankind would be prodigiouſly increaſed.

But though there be nothing in this ſuppoſition contrary to reaſon, *viz.* That after the year of the World 500 they might *treble* themſelves in 20 years, yet we will not reckon upon ſo ſhort an interval, but will allow a much longer time, even to their doubling themſelves, and ſhall exhibit two tables of doubling, the firſt at the interval of 50 years (much too long indeed) the other at the interval of 40 years, and both beginning at the year 500, when there could not be fewer (whatever more there might be) than 100 married or marriageable perſons deſcended from *Adam* and *Eve.*

Years of the World.	Number of Mankind.
500	200
550	400
600	800
650	1, 600
700	3, 200
750	6, 400
800	12, 800
850	25, 600
900	51, 200
950	102, 400
1,000	204, 800
1,050	409, 600
1,100	819, 200
1,150	1, 638, 400
1,200	3, 276, 800
1,250	6, 553, 600

1,300

Years of the World.	Number of Mankind.
1,300	13, 107, 200
1,350	26, 214, 400
1,400	52, 428, 800
1,450	104, 857, 600
1,500	209, 715, 200
1,550	419, 430, 400
1,600	838, 860, 800
1,650	1, 677, 721, 600
1,700	3, 335, 443, 200
1,750	6, 710, 886, 500
1,800	13, 421, 772, 800
1,850	26, 843, 545, 600
1,900	53, 687, 091, 200
1,950	107, 374, 182, 400
2,000	214, 748, 364, 800
2,050	429, 496, 729, 600

I have calculated this table at the long interval of 50 years, that it may appear that even by underrating the number of mankind, there would be so many millions born into the world before the Deluge came, that they would be obliged to spread themselves over the face of the earth, though but one half of the sum total of 429,496 millions had been alive at the time of the Deluge; but as I take the interval here allowed to be too long for the time of doubling, I have calculated the second at the interval of 40 years, which comes nearer to the truth of the case, though even this may exceed the time of doubling.

Years of the World.	Number of Mankind.
500	200
540	400
580	800
620	1, 600

Years of the World.	Number of Mankind.
660	3, 200
700	6, 400
740	12, 800
780	25, 600
820	51, 200
860	102, 400
900	204, 800
940	409, 600
980	819, 200
1,020	1, 638, 400
1,060	3, 276, 800
1,100	6, 553, 600
1,140	13, 107, 200
1,180	26, 214, 400
1,220	52, 428, 800
1,260	104, 857, 600
1,300	209, 715, 200
1,340	419, 430, 400
1,380	838, 860, 800
1,420	1, 677, 721, 600
1,460	3, 355, 443, 200
1,500	6, 710, 886, 400
1,540	13, 421, 772, 800
1,580	26, 843, 545, 600
1,620	53, 687, 091, 200
1,660	107, 374, 182, 400
1,700	214, 748, 364, 800
1,740	429, 496, 729, 600
1,780	858, 993, 459, 200
1,820	1, 717, 986, 918, 400
1,860	3, 435, 973, 836, 800
1,900	6, 871, 947, 673, 600
1,940	13, 743, 895, 347, 200
1,980	27, 487, 790, 694, 400
2,020	54, 975, 581, 388, 800

The

The reader may obſerve that I have brought the firſt table no lower than to the year 2050, and the ſecond to the year 2020, though there remain by the firſt 206, and by the ſecond 236 years to the Flood; the reaſon is, that in thoſe laſt 200 years of the old world, mankind would not increaſe in any meaſure equal to what they had done in the preceeding years (though regularly the increaſe ſhould have been much greater) becauſe that *violence* was then great in the earth, and thouſands, yea millions might have been cut off by untimely deaths, for which cauſe the world's deſtruction was determined 120 years before the Flood came.

But now againſt this immenſe number of mankind that might in a regular and ordinary way have been *born* into the world between the Creation and the Deluge in 2056 years, it will no doubt be objected by ſome (as it has been done to far leſs numbers) that all ſuch calculations are mere gueſs work, the product of fruitful imaginations. That it is an eaſy matter to multiply men to what number we pleaſe upon paper, but that in fact it will be quite otherwiſe.

To this I anſwer, that in calculations of this nature ſome regular order or method muſt be obſerved, and though according to the courſe of nature, ſuch an increaſe and multiplication of mankind there might have been periodically, eſpecially at the beginning, when the command was *to increaſe and multiply and repleniſh the earth*, yet we will not ſuppoſe that all things went on thus regularly, without difference or interruption. We do not know what extraordinary obſtructions or interruptions there might be to ſuch a regular increaſe. Tho' evey married pair might by the courſe of nature have had ſuch a number of children as has been mentioned, yet the Divine Providence which ſuperintends all things might order it otherwiſe in manifold inſtances, and it might poſſibly be in the old world as it has been ſince the Flood, *viz.* that ſome marriages have produced

many children, others few, and ſome none at all. Thus for inſtance, *Abraham* had but eight children though he lived to 175. *Iſaac* had but two, and thoſe at a birth, who lived to 180. *Jacob* had but 13 by four wives, and ſome might be barren, and many ſuch caſes there might have been among the *Antediluvians*, as *Noah* for inſtance who had but three ſons, at leaſt that we know of. Now I acknowledge that this might be ſo in the old world, for any thing we know to the contrary, eſpecially after it came to be pretty full of people, though it is not probable to have been thus at the beginning; and therefore allowing for all ſuch obſtructions and deficiencies, and likewiſe for all caſualties and accidents (to which men might be liable in that world as well as in the preſent) in as ample a manner as can be deſired, and more by far than I think the caſe will require, I ſhall reduce the former number to one half, *viz.* to 27,487,790,694,400, that is, 27 Billions, or Millions of Millions, four hundred and eighty-ſeven thouſand ſeven hundred and ninety millions, ſix hundred and ninety-four thouſand and four hundred. And this we ſhall now ſuppoſe to be the whole number of thoſe who were *born* into the world before the Deluge. But from this ſum is to be ſubſtracted the number of thoſe who died before that time.

Of thoſe in the Genealogies from *Adam* by *Seth*, *Enoch* was tranſlated at the age of 365, *Lamech* the father of *Noah* died juſt before the Flood at 753, *Mahalaleel* at 895. *Adam* and the other five Patriarchs lived to above 900. Before the year 900 therefore we may ſuppoſe there were no deaths, except that of *Abel* who was ſlain a young man, but that all born within that period were alive together. But in the *tenth* century death began to reign, and *Adam* and *Eve* we may preſume were the firſt over whom death had power in a natural way, as their diſobedience was the cauſe of it. The children alſo born of them

in

in the first hundred years would also die in this 10th century, those born in the second hundred would die in the 11th, those born in the third century would die in the 12th, and so on. But though we are far from thinking that after the beginning of the 10th century (till which time few or none died) the deaths would be equal to the births, yet as we have made large concessions all along, we shall do the same in this case, and suppose them upon the whole to have been equal, especially since we cannot precisely say how soon that *Violence* or blood-shed, which was their crying sin, came to prevail; and therefore will reduce the last sum mentioned to one half again to allow for the *deaths* and prevailing *violence*, and suppose the total number of mankind alive upon earth at the time of the Deluge, to have been no more than 13,743,895,347,200, that is, 13 Billions or millions of millions, seven hundred and forty-three thousand eight hundred and ninety-five millions, three hundred and forty-seven thousand and two hundred; a number, I presume, vastly exceeding that of the present inhabitants of the whole Earth.

SECT. II.

That the preceeding Computation of the number of mankind before the Deluge is agreeable to Reason, and founded on Facts.

NOtwithstanding the very large allowances and abatements made to reduce the number of mankind, yet even the last reduction to 13 Billions, or Millions of Millions, &c. seems so vastly great, as it will hardly be thought possible that such a number of men could ever be at one time upon the earth. Now though we pretend to no certainty in this point (which made it the more requisite to allow largely for deaths and deficiencies) yet the calculation we

have given muſt appear highly probable, ſince it is founded on grounds certain and undeniable: for inſtance,

1. It cannot be denied but that the *Antediluvians* were come to the age of puberty and marriage at 160 years, when we find a ſon born in 162. Nor

2. Can it be ſaid, that they could not have children at the age of 500, when we have an inſtance of one that had three ſons at due diſtances, after that age. Neither

3. Can it be alledged that we have not allowed a due diſtance or interval between the births, *viz.* ſix years, when moſt will be of opinion that it could not be ſo long. Nor yet

4. Can it be judged that we have made the period of doubling far too ſhort, when we had before ſhewed that after 100 marriages conſummated, they would treble themſelves in half the time we have taken for their doubling. Nor

5. Will any one I believe make a doubt, but that there might be 200 perſons of mature age for marriage in the year of the World 500, the men at 160, the women younger. Nevertheleſs as this is the foundation of our calculation, we ſhall now ſhew that there was at leaſt ſuch a number of perſons marriageable at that age of the world.

It may be obſerved, that as we take 160 for the year of maturity and marriage, according to that period all married or marriageable in the year 500 muſt have been born in or before the year 340, the males at leaſt, though the females coming ſooner to maturity might ſome of them be born later or after the year 380. Now according to this ſtated period of marriage

1. In or before the year 340 *Adam* might have had 54 children, males and females, or 27 pair married or fit for marriage.

2. *Cain*,

2. *Cain*, whom we suppose to be but six years younger than *Adam* (which by the by is more than others allow) and to have married in the year 166, might have in the year 340 twenty-eight children, or 14 pair fit for marriage, which added to the former makes 41 pair.

3. *Abel* married six years later, that is, in the year 172, and whom we shall suppose slain in the year 225 or 226, could in that case have no more than eight or nine children, or four pair, which with the former make 45 pair.

4. *Adam*'s third son married in the year 178 will afford us in the year 340 26 children or 13 pair, which increase the number of marriageable persons to 58 pair.

5. A fourth son of *Adam*'s married in the year 184, will give us in the year 340 25 children or 12 pair, which makes the number of pairs 70.

6. A fifth son of *Adam*'s married in the year 190, might in the year 340 have 24 children or 12 pair again, which increase the former number to 82 pair.

7. A sixth son of *Adam*'s married in the year 196, would have in the year 340 22 children or 11 pair, which added to the former make up 93 pair.

8. A seventh son of *Adam*'s married in the year 202, will in the year 340 give us 20 children or 10 pair, which makes in the whole 103 pair, already three pair more than we reckoned upon. I need therefore go no farther on to the eighth or ninth son; but the following eight or nine births I may reasonably take to have been daughters, and married to the brothers that preceeded them.

Here are now no more than 14 children of *Adam*'s married, who have given us the 100 pair we have reckoned upon and three over. We might yet have 13 pair to bring in to the account, all born before the year 340, and marriageable in the year 500, which would very much increase the number of mankind.

mankind. And by this the Reader may perceive that we have been far from building on uncertain or precarious foundations, ſince we have omitted 13 pair more, which we might have taken into the account. And if it be conſidered that the command given to *Adam* was to increaſe and multiply and repleniſh the earth, no doubt I think can be made, but that his own and his childrens marriages were fruitful in the procreation of children that the Earth might be inhabited.

Now that there is nothing extravagant or incredible in this very large number of mankind I have reckoned, will further appear by what Sir *Walter Raleigh* hath on this ſubject.

---------" For what a ſtrange increaſe did the long " lives of the firſt Ages make, when they continued " 800 or 900 years? Surely we have reaſon to " doubt that the world could not contain them, " rather than that they were not ſpread over the " world. For let us now reckon the date of our " lives in this age of the world, wherein if one ex- " ceed 50 years, ten for one are cut off in that paſ- " ſage, and yet we find no want of people. Nay " we know the multitude ſuch, that if by wars or " peſtilence they were not ſometimes taken off by " many thouſands, the Earth, with all the induſtry " of man, could not give them food. What ſtrange " heaps of Souls then had the firſt ages, who enjoyed " 800 or 900 years as aforeſaid? Theſe numbers, " I ſay, cannot be counted or conceived. For it " would come to the ſame reckoning in effect, " as if all thoſe which have been born in *Britain* " ſince 3 or 400 years before the *Norman* Conqueſt " (ſaving ſuch as by accident or violence were cut " off) were now (*An.* 1612) alive, and if to theſe " there were added as many as by *Polygamy* might " have been increaſed *."

* B. 8. Chap. 8. § 11.

But

But now some may think that we might have saved ourselves all this labour in computing a-new the number of mankind in the *Antediluvian* world, since it has been done by others before us, particularly by the learned Mr. *Whiston* in his *Theory of the Earth*, in a table of doubling at 40 years, and which was adopted by the Gentlemen who have published the laborious work of the *Universal History* in the first Edition, so far as the *Samaritan* Copy carries the age of the World to the Deluge, tho' in the Octavo Edition they have taken to the Numbers in the *Hebrew* Copy. But this table, though the numbers there may be thought sufficient for the peopling of the Earth, we could by no means depend upon, for the reasons we shall now give.

1. It is laid down there as a foundation, that the *Antediluvians* would double themselves every 40 years, as I believe indeed they would, and in less time, after there came to be 100 marriages. Now had the Author observed this regular progression in his computation, by adding 40 years to every former period of the age of the world, the Amount, instead of two millions of millions &c. would have been above five millions of millions at the year 1656, the age of the World at the Deluge, according to the *Hebrew* numbers which he contends for. What would the sum then have been, had we carried on the computation for 600 years more according to the *Septuagint?*

2. He supposes the period of doubling must have been much shorter in the earliest ages, and much longer in the later, contrary to reason and fact. For mankind being sprung from one pair only, the increase at first must have been very slow, but come on very fast when a considerable number were married. His Table therefore is made not regularly, but according to fancy, by unequal starts or chasms, at great intervals in the later part, where it should have

have been moſt regular; it would ſeem with no other view than to raiſe ſuch a number upon the whole, as might be thought ſufficient to people the Earth.

3. In that calculation the two material points, the time of nurſing, and the age of puberty are quite overlooked, by which all computations of the numbers in the *Antediluvian* World muſt be regulated. What unavoidable miſtakes this omiſſion muſt occaſion, will be ſeen by examining the firſt ten numbers of the ſaid table.

Years of the World and Intervals of doubling.	Number of Increaſe according to the Intervals.	
1	2	*Adam* and *Eve*.
2	4	*Cain* and *Abel*.
6	8	
12	16	
20	32	
30	64	
42	128	
56	256	
72	512	
90	1024	
110	2048	

On this table I obſerve, 1. That though there were but two perſons created at firſt, this computation makes four perſons in the ſecond year of the World. This could not poſſibly be, except *Cain* had been born within 12 months after the Creation, which is highly improbable, and *Abel* in the ſecond year, yet far more improbable; for in that caſe *Eve* could not have ſuckled *Cain*.

2. In the ſixth year of the World we have eight perſons, that is, ſix children of *Eve*'s in ſix years. But in the name of wonder, what ſhall *Eve* do with ſix children, and ſix infants in ſix years? Where could ſhe find ſo many wet nurſes for them? Or would the mother of all living deny her children that

that nourishment which the Creator had appointed for their first food, the milk in her breasts? Do they consider that there was but one woman in the world to do for herself, her husband and her children what belongs to women to do? We should surely have more respect and compassion for the mother of all mankind, than to lay such an intolerable burden upon her, whose sorrow for her own *deception*, and thereby ruining both herself and her husband, must have been very great for many years. In punishment of which, though God had said, *he would greatly multiply her sorrow and conception* *, the meaning was not, that she should have a child every year, which could not be, because the nature of that food and nourishment appointed by himself for her children would not permit it. Nor yet when he commanded them to *increase and multiply and replenish the Earth*, could the command be obeyed in such a manner as was contrary to the order of nature and Providence. But the method intended to answer the design of the Command was to prolong their lives to above 8 and 900 years, and their prolific powers for 340 or 360 years of that term of life, that by slow and sure and long continuance of increase, they might people the earth in due time. Hence it appears evident that there could be no such speedy increase of mankind at the beginning as is imagined, and that the time of nursing I have allowed in the first ages, was no more than necessary for that strength of constitution which was to last for 8 and 900 years; and that women who were to continue bearing children for 340 or 360 years of their life, should have them but slowly, and at the

* Admodum multiplico dolorem tuum, etiam conceptus tui, in dolore paries liberos; id est, inde a conceptu, dolore conjuncta erunt gestatio, partus, educatio & cura liberorum: quam ad functionem obeundam viro jungeris. *Junius.* —*Hebr.* multiplicando multiplicabo.

distance

diſtance of ſeveral years, that their ſtrength might hold out, and that they might not be overburthened with too many cares at once, and therefore when *Eve*'s firſt child was ſix years old, it was time enough for her to have another, and ſo on, though poſſibly ſometimes twins.

3. The ſame exception lies to all the following periods of doubling, where the number far exceeds what it could poſſibly be in fact; but we ſhall paſs them over, and come to the laſt of them in the year 110, in which the number of mankind is made 2048. Now in the year 110 not one of *Adam*'s children were married, becauſe not yet come to the age of *puberty*. In that year of the world, there could be no more than 18 or 20 perſons, at ſingle births, beſides *Adam* and *Eve*. It is a grievous miſtake therefore to imagine, that the periods of doubling were much ſhorter in the earlier times than in the later, the contrary of which is evident to reaſon.

SECT. III.

An Objection againſt the Earth's being fully peopled before the Flood in the Origines Sacræ *anſwered.*

AGAINST this immenſe multitude, which we have ſhewed there might have been by the ordinary courſe of nature upon the Earth before the Flood, a conſiderable objection is made by the very learned author of the *Origines Sacræ*, viz. "That it "ſeems ſtrange, that in ſo ſhort an interval in com-"pariſon as that was from *Adam* to the Flood, ac-"cording to the ordinary computation, *viz.* 1656 "years, and not much above 2000 years accord-"ing to the largeſt, the World ſhould be then fully "peopled, when in ſo much a longer time ſince the "Flood

" Flood to this day, the Earth is capable of receiv-
" ing far more inhabitants than it hath." In answer to this let it be observed.

1. That though mankind might have been thus numerous before the Flood, it was many ages ere it became so populous. In the year of the Creation 1100, I have reckoned only 6,553,600 *, even supposing all of them to have been alive at the time, a number not equal, by the most moderate computation, to what there are at present in *Great-Britain*, though yet they must have inhabited a much greater part of the Earth, for a reason that will be seen hereafter; and when once they came to number millions, they would increase exceedingly.

2. The immense numbers in the old World may be easily accounted for from their very long lives, and their being for 8 or 900 years cotemporary. Though they married not till 150 or 160, yet they continued to have children for 340 or 360 years after, so that each pair might have had 54 or 58, even at the distance of six years between the births. Of all the *Antediluvian* Patriarchs before *Noah*, it is said that they *begat sons and daughters:* they must then have had several of each sex, and the same

* Not that there were in fact no more persons on the Earth at that time, since there might have been double and treble that number, but only that we have reckon'd on no more. For the Reader may observe, that in making up our Account from the year 500, we had three pair over to reckon upon, and omitted 13 pair besides, which, if taken in, would have greatly swelled the Account. 2. We have shewed that mankind would treble themselves in 20 years after 100 marriages, whereas we have reckon'd only on their doubling themselves in 40 years; so that in the year 1656 (the Age of the World at the Deluge, according to the *Hebrew* Computation) Mankind might have spread themselves over all the Earth, tho' not so fully peopled it, as in some ages more. It was by no means therefore in order to multiply the Numbers that we have preferred the reckoning of the LXX, but for the substantial and unanswerable reasons that we have given.

fruitfulness we may reasonably suppose in the rest of mankind in general.

3. The number of mankind since the Flood might have been by many thousands of millions greater than it is at present, were it not for the many bloody wars, famines, plagues and pestilences, which sweep away many thousands at once. How many millions, or rather millions of millions, have been cut off by wars alone, in all the several ages and countries of the world, since the days of *Abraham?* The history of the world is little else than the history of wars and bloodshed. Again, so great and universal has the Plague been sometimes, as almost to depopulate the Earth *: Whereas in the *Antediluvian* world, 'tis probable that no extraordinary judgment of that kind from Heaven had overtaken them, till the Deluge came and buried them all in the waters, at least there is no mention or intimation of any such calamity having befallen them; for that *Violence*

* Under the Emperors *Vibius Galius* and *Volutianus* his son, about 240 years after Christ, there arose a plague in *Ethiopia* which spread itself into all the provinces of the *Roman* Empire, and lasted by the space of 15 years together without any intermission. Yet was that more impetuous and outrageous under the Emperor *Justinian*, when only in *Constantinople* and the places adjacent, it cut off at least 5,000, and sometimes 10,000 in a day. Neither less wonderful was that pestilence in *Africa*, which only in *Numidia*, snatched away 800,000 men; or that under *Michal Duca* in *Greece*, which was so sharp and violent, that the living were no way sufficient to bury the dead. In the year 1359, in *Italy*, in the time of *Petrarch*, the plague scarce left alive ten of a thousand throughout the whole country. And if we credit *Boccace*, there died thereof in *Florence*, from *March* to *July*, about 100,000 persons. See *Hakewell's Apology*, Lib. 2. Sect. 3. And for destruction by Earthquakes, See Sect 4.

In the year 1606 the Plague was so violent at *Cairo*, that there died 10,000 every day. This terrible scourge fell upon all the higher *Egypt*, and the country of the *Barbarins*, so that we found several towns and a great number of villages without inhabitants, and large provinces, at other times very fertile, quite laid waste and intirely abandoned. *Poncet's* Travels.

which

which became outrageous at last, did not prevail till the latter days of that World, and might in part be owing to their very great multitudes.

4. That mankind does not increase in proportion to what it did before the Flood, and to what indeed it might even now do, is owing to various causes. As 1. The strong and healthy constitution of the *Antediluvians* (as appears from their longevity) and that strength probably confirmed by labour and exercise, made sicknesses and diseases more rare than at present, so that bating accidents, few died but of old-age, as we find all those mentioned in the Genealogies died at a good old-age. Whereas now, through idleness, luxury, &c. diseases have greatly prevailed in the World, and the greatest part of mankind never see old-age. 2. The many thousand Infants that die yearly in the several parts of the world, which we do not think happened to the *Antediluvians*. 3. The many thousands that profess Cælibacy, not only amongst the *Greeks* and in *Roman* Catholic countries, but amongst the *Gentiles* and *Mahometans*, whereas in the old world, we have no reason to think that any such custom was in use, nor yet for many ages after the Flood. Add to this the many thousands more, especially in *Europe*, who from a principle of *Libertinism* decline marriage to indulge their lusts, and thousands more who out of *poverty* are fain to abstain from it, not being able by their labour to maintain a family. And 4. The many thousands that engage in the two professions of *Soldiers* and *Sailors*, few of whom in comparison of the number, enter into the married state, *Soldiers* especially, who cannot always obtain leave to marry, and whose unsettled state seldom enables them to rear up their children. To which we may add, 5. The great numbers of Eunuchs in all the Eastern Countries, a Practice which has been in use for some thousand years.

But to these several causes we must add yet another, *viz.* the manifold Judgments of a righteous God upon a wicked World, in the utter overthrow by Earthquakes, Inundations and other means, of many flourishing cities and countries, from time to time, in all the several parts of the world, *who turneth the rivers into a wilderness, and water-springs into a dry ground, a fruitful land into barrenness for the wickedness of them that dwell therein.* These several considerations abundantly shew, why the increase of mankind since the Flood has not been in proportion to what it was before it: So that upon a serious review of all the particulars, 'tis rather a wonder that we find it so populous as it is at present.

4. *That the Earth is capable of receiving far more inhabitants than it now hath,* I believe to be very true, perhaps treble or quadruple the number, especially in *America,* was every spot of ground cultivated with art and care, as it is generally in *China,* or in *Holland* and *Flanders.* But how many millions of acres in the present earth lie uncultivated through the lazinefs and idlenefs of the inhabitants, or are still covered with vast woods and forests, large *Moors* and undrained *Marshes.* But yet was the present Earth cultivated as it might be, it could not maintain such a number of inhabitants as the former World did, for reasons that will be given hereafter.

Upon the whole then, I presume it appears pretty plain that the increase of mankind before the Flood might have been by the ordinary course of nature so great as our last reduced number by the abatements made, gives it, *viz.* 13,743,895,347,200. But if even this last number be thought prodigious, and that it is inconceivable there should be such an immense multitude at any one time upon the Earth: Nevertheless from all that has been said on this subject, it is very evident, that there could not fail to have been so great a number of mankind before the

Deluge, as must needs have overspread the whole earth, and fully stocked it with inhabitants.-------- And therefore as it is granted by *Vossius*, *Stillingfleet* and others, that the Flood prevailed wherever mankind inhabited, it necessarily follows that *The whole Earth was drowned by the Flood.* Which was the Point to be proved.

Hence the Reader may perceive likewise that the learned *Vossius* has espoused two opinions utterly inconsistent, *viz.* That mankind was so few in number before the Deluge that they might all have been contained in *Mesopotamia* and *Syria*, and yet that the age of the world at the Flood was 2,256 years according to the *Septuagint*. Whereas had he judged the number of mankind to have been so small, he ought agreeably to that number rather to have embraced the *Samaritan* computation, which makes it no more than 1,307 years from the Creation to the Deluge. But if this he could not do, as plainly perceiving, that the years therein ascribed to puberty and generation, contradicted the order and law of nature; and that this very reason obliged him to espouse the *Septuagint* Chronology against both the *Hebrew* and *Samaritan*; then one would think that the age of the world he contended for, might have convinced him that it was impossible for all mankind in the space of 2000 years to be confined to so small a part of the Earth as he pretends, or even to any one Continent. The only argument he brings for the paucity of mankind being so far from serving his purpose, that it is found to prove the very contrary, as has been before demonstrated.

I expect it will be said that *whatever proves too much, proves nothing*; and therefore it will be objected that we have made the number of mankind so immensely great, even in our last reduced number, that it is not conceivable how the earth could maintain such a multitude of people. I confess this

is a matter of ſome difficulty, eſpecially when *Animal* food was not yet granted to mankind, as we have before ſhewed, and ſhall more fully prove hereafter. We ſhall therefore make this the ſubject of a ſubſequent Inquiry. But we have another point previouſly to be diſcuſſed, in order to remove ſome other objections to an Univerſal Deluge, ſince we muſt clear our way as we go along.

SECT. IV.

Of the increaſe of the Animals, and whether every Land had its Animals from the firſt Creation; alſo of thoſe peculiar to America.

IF the Reader pleaſes to look back to the quotatation from the *Origines Sacræ*, he will find that from a certain and well known fact, *viz.* That there are ſeveral kinds of Animals, birds, beaſts and creeping things in *America*, which are not found in the other parts of the world, a double argument is formed.

1. "That it is highly probable that every Land "had its *peculiar* animals from the firſt Creation." 2. "That from thence it would appear that *Ame-* "*rica* was not ſubjected to the Deluge." Now to the firſt of theſe I anſwer,

1. That how large ſoever the ſurface of the Globe of the Earth be, yet it pleaſed the Creator to make but one man and one woman, by whom the whole Earth was to be peopled in time, and that for a wiſe and excellent reaſon (which we ſhall have occaſion perhaps to take notice of hereafter) well therefore might the Earth be furniſhed with animals of all kinds by degrees, and in due time, though but one pair of each kind had been created at firſt.

2. Had

2. Had more than one pair of each kind of animals been created at first, they would in 4 or 500 years, while men were few in number, have multiplied to that degree that mankind could not have subsisted for them. They propagate yearly, and many of them have more than one at a time, none of them were eaten for food, and but few kinds offered in sacrifice. Now as the food of man was only *vegetables*, *fruits* and *grain* produced by culture (or if any thing else it will be enquired into in another place) there was nothing of man's food which was not also food for some or other kind of animals. Had many of a kind then been created at first, and every Land had some of these in it, they must have increased in a few Centuries to such numbers, that when men came in process of time to spread themselves on the Earth, the animals would have devoured almost every thing that mankind had to live on. That this is no vain imagination is evident from facts and experience *. We have good reason therefore

* In the Kingdom of *Champua* in the *Indies*, the river called by the Natives *Tinacoreu*, but by the *Portugese Varella*, goes up 80 leagues into the Country to a mountain called *Moncalor*, above which it is much broader, but not so deep by far; there being banks of sand in some places and lands overflowed with water, where there are an infinite number of fowls that cover all the country, insomuch that by reason of them, the whole kingdom of *Chintalcubos* had for 40 years before become desolate, though it was 8 days journey in length, which at 30 miles a day, made it 240 miles long. That after passing this country now inhabited by fowls only, there was another more wild and full of great rocks, were there were a great many animals yet worse than the fowls, as elephants, rhinocero's, lions, bears, buffles and other beasts in such multitudes that whatever men cultivated for the support of life was spoiled or destroyed by them, nor was it possible for them to prevent it. *Mendz Pinto.*

The *Isle* of *France*, formerly called the Isle *Maurice* may be said to be the kingdom of *Rats*. They come down from the mountains like an army, they creep up the steepest rocks, they march into the flat county, assemble in the marshy grounds,

fore to conclude, that there was but one pair of each of the animal kind created at firſt, that they might not increaſe too faſt for mankind; and though they would multiply much more and increaſe faſter than men could do, they had room to ſpread themſelves for a long time without much annoyance to man; and as men increaſed in number and extended their habitations, they would be able to drive them further off, or defend themſelves from their depredations.

The ſame we ſay with reſpect to the fiſhes of the Sea and the Rivers, for though the increaſe of the *Aquatic* animals could be no annoyance to man living on the land, ſo that the creation of more than two of each kind could be no prejudice to him, yet if we conſider what a large and numerous ſpawn fiſhes caſt at once, and in how ſhort a time they would multiply to immenſe numbers, notwithſtanding they prey upon one another; as alſo that all rivers run into the ſea, and that all ſeas have a communication with one another, we may, I think, reaſonably conclude, that but one pair of each kind of *Water* animals was created at firſt, and that the command to the waters to bring forth abundantly both fiſh and fowl, and the ſame to the earth to bring forth her living creatures reſpected the va-

and bring deſolation every where eſpecially in the night. I have myſelf ſeen them in the entrance of night coming out of the earth in great numbers like piſmires, and carry deſtruction every where: Nothing eſcapes their teeth. Men can ſcarce ſleep for them and are obliged to roll themſelves in ſuch things as may ſave them from their bitings: They are ſo bold as to fight upon their very bodies. It was the ſame in the Iſle of *Bourbon*, which was as much infeſted with them at firſt, till it became more fully peopled. *Miſſ.* Letters.

Of the great inconvenience from and miſchief done by variety of creatures in the *Indies*, ſee *Hackluytus Redivivus*, by *Purchas*, p. 565. And of a two years famine by graſhoppers in the country above *Buenos Ayres*, p. 909. Many more like inſtances might be adduced.

riety

riety of the several kinds, and not a number of each species.

3. In confirmation of this we may observe, that though there were eight persons saved from the Deluge, by six of whom the earth was again to be replenished, whereas at the beginning it was only by two; and though animals of all kinds were then given to be food for men, which till then they were not, nevertheless *Noah* was commanded to take into the Ark, no more than two of a kind to keep up the breed, clean beasts (which are but few in number) only excepted, and yet which is observable so much were the animals increased in about 500 years, when the posterity of *Noah* settled in the land of *Shinaar*, that they were obliged to hunt them in order to destroy or drive them further; and *Nimrod* for his courage and skill in that necessary employment, became famous in after ages as well as powerful in his own. And so numerous were the animals before the flood, though but two of a kind created at first, that Dr. *Woodward*, from the remains of that earth as well the *Animal* as *Vegetable* productions of it still preserved, concludes, "that at the time "the Deluge came, the earth was so loaded with "herbage and thronged with animals, that such "an expedient was even wanting to ease it of the "burden, and to make room for a new succession "of its productions."

4. If all the animals were created for the use and benefit of man, as is by the learned Author and others supposed, and that *America* was not inhabited by mankind before the Deluge, as is by the same Authors supposed, then what occasion was there for animals in *America* 3 or 4 thousand years before it was inhabited? "To what purpose is it, says Mr. "*Whiston*, that all proper provision be made for the "entertainment of a company of guests at a table, "when it is certainly known that not one of those

"guests will be there?" This is *apropos* to the present case, but if applied to the Earth in general would prove too much and run into an absurdity, since it may as well be asked, why was so vast a Globe as this Earth created at once, when it could not be inhabited by mankind in 1,800 or 2,000 years?

But neither of these suppositions mentioned can we admit for truth. Not the first of them, *viz. That all the animals were made for the use and service of man*, since it is evident that many of them are pernicious and destructive to him, not only to single persons but to whole cities and countries *. And therefore when we reflect upon the vast variety

* Anno Christi 1587. Belgae in genti peste & fame conflictati sunt. In Flandria passim municipia & pagi habitatoribus vel bello necatis, vel peste absumptis, vel fame mortuis; vacui meram solitudinem praeterebant; adeo ut in domibus ferae bestiae & lupi stabularentur, qui ad eum aucti fuerant numerum, ut non tantum pecora, verum etiam pueros, imo viros & mulires invaserint, ex matrum sinu et complexu infantes abripientes & dilanientes. In agro Gandavensi urbi vicino, ultra centum homines a lupis devoratos memoriae proditum est, prevalente adversus incolarum paucitatem ferarum multitudine. *Matthiae* Theatr. Histor. *p.* 1126.

Madurè in the Indies is very much infested with tygers, who come out of the woods in quest of water, which is generally in ponds near the villages, and often devour not only beasts but even children and men. The fear of them was so great, that they were obliged to keep guard every night in the villages and light great fires. No body durst stir abroad after it was dark, and men must be well accompanied even in the day time. In passing through the woods in the night time, some carried lighted torches, others beat a drum, the noise of which frightens the tygers and puts them to flight. *Mission. Letters.* T. S.

The natives in the country about *Malacca* lodge in trees for fear of tygers——which in the height of 8 yards will reach and devour men. Their chief preservatives against them are night-fires. The multitude is such that many enter into the city by night for prey. After the *Portugese* had taken it, a tyger leapt over a high wall, and carried away three slaves tied to a piece of timber together with the wood, leaping again upon the wall with admirable lightness.— Also at *Negrais* in *Pegu* their houses are set

riety of animals, birds, beasts, and creeping things from the smallest *animalcula*, which cannot be discerned by the naked eye to those of the largest size, as *elephants*, &c. as also on their different natures and properties, we shall have reason I think to conclude, that they were not all made for the use and service of man only, but to manifest the power, wisdom and bounty of the Creator, and for ends and uses we are not fully acquainted with. But yet thus far have all a respect to man, that in the hand of Providence they are made subservient either to his *benefit* or his *punishment*. And from this great variety of animals, some beneficial, others destructive, we may collect that man was created and placed in a *probationary* state. Had he continued in his innocence and obedience, none of all the creatures would have been prejudicial to him, and he would have retained that dominion over them with which he was at first invested; but in a state of sin and disobedience, they became many of them destructive to him, and are often made the instruments of his punishment.

Not the second, *viz. That* America *was not inhabited by mankind before the Deluge.* Because *America* is so very large a portion of the habitable Earth,

set on high posts, to which they go up by ladders, for fear of tygers. *Purchas.*

Not only lions, tygers and other fierce beasts, but the most contemptible animals may prove mischievous to mankind. *Pliny* relates that anciently a town in *Spain* was wholly undermined by rabbits, and a town in *Thessaly* by moles. The inhabitants in a town in *France* were constrained to quit their dwellings on account of the great number of frogs there. Grashoppers produced the same effect in a town in *Africa*. Nay serpents in other places have devoured the people; for they being of the opinion of *Pythagoras*, and not daring to kill them, this gave them an opportunity to multiply to a prodigious number.—— The devastations made by locusts is well known.——The Israelites were forbid to destroy the inhabitants all at once, lest the beasts of the field should increase and prevail against them.

that

that ſhould that be cut off, the remainder, *viz.* the other three Continents could not poſſibly have maintained the numbers of mankind that were upon the earth before the Flood. And thus much in anſwer to the firſt argument drawn from the ſtrange animals in *America*, viz. *That every Land had its peculiar animals from the Beginning.*

The ſecond argument brought from the ſtrange creatures in *America* is, that it would appear that *America* was not ſubjected to the Deluge. The ſtrength of this argument lies in the following difficulties. " If every Land had not its own animals " from the firſt Creation, how ſhould the ſeveral " kinds of animals have paſſed from the place of " their creation into all the parts of the earth, after " the waters had divided ſome parts thereof from " the other, ſo that there could be no paſſage for " the cattle, creeping things and beaſts of one part " into another without the help of man."

2. " How ſhould the unknown ſerpents in *Bra-* " *zile*, the ſlow-bellied creature in the *Indies*, and " all thoſe ſtrange ſpecies of animals in the *Weſt-* " *Indies*, either come into the Ark of *Noah* or be " conveyed out of it into thoſe countries, which are " divided from the Continent where the Ark was, " by ſo vaſt an ocean on the one ſide, and at leaſt " ſo large a tract of land on the other, ſuppoſing " any paſſage out of one Continent into the other " which hath not yet been diſcovered *."

3. If

* Though the modern Geography is much more improved than the ancient, yet is it far from being perfect. Few countries beſides thoſe in *Europe*, that of *China* and ſome parts of *America* by the Miſſionaries are exactly deſcribed, and the greateſt part of *America* as well as vaſt parts of *Aſia* and *Africa* are but little known to us.

California was ſuppoſed to be a very large iſland, but is now by the Miſſionaries diſcovered to be a part of the Continent of *America*, ſeparated only by a river to the north, and an arm of the ſea running up for many leagues into the land.

Geographers

3. "If those strange creatures that are now in "*America* came first out of the Ark, how comes it "that they have left no traces of themselves behind, "neither about the places where the Ark rested, "nor in any other land between, but are now only "to be found in *America*? And

4. "Some Animals cannot live out of that parti- "cular clime wherein they are, whence it is highly "probable that every land had its animals from the "beginning; and there being animals peculiar to "*America*, and no where else to be found, this is a "strong argument that *America* was not subjected "to the Deluge." Now

In answer to the first of these, why should that be thought a difficulty with respect to the *Antediluvian* world, which is not accounted such with respect to the present? All the men and animals in the other three Continents came originally out of the Ark of *Noah*, and yet have found a passage into all those parts of the earth and *islands* belonging thereto, though separated by mountains, rivers, lakes and seas. As the earth was made to be inhabited both before the Flood and after, so have both men and animals found their way into all the different parts of the earth.

Geographers have described *Japan* as a groupe of *Islands* contiguous and forming as it were one body, but now it is doubted whether it may not be part of a Continent to the north. For the Jesuits who lived a long while in *Japan*, and after them some *European* merchants who travelled over all the country, probably conjecture that it joins upon *Jezzo* or *Yedso*, by a chain of unpassable mountains; but is separated by an arm of the sea which runs a great way up between the lands, which obliges travellers to cross that arm of the sea from one place to the other. *Yezo* or *Yedso* is supposed to border on *East Tartary*.

Father *Hennepin*, in the account of his travels through a great part of *Louisiana* positively affirms that *Japan* is contiguous to the northern *America*, of which opinion was also the learned *Grongvius*.

2. The

2. The ſecond difficulty or objection conſiſts of two parts. 1. How thoſe animals peculiar to *America* ſhould find a paſſage from thence into the Ark of *Noah* in order to their preſervation. And 2. How they ſhould be able to get back again from thence after the Deluge. As to the firſt of theſe, we muſt examine a little that ſuppoſition on which it ſeems to be grounded, *viz.* the place of *Noah*'s habitation when he built the Ark. That is ſuppoſed to be in *Meſopotamia* or *Chaldea*, but there is no manner of certainty of this. *Moſes* gives us no account of the country where *Noah* lived. Men may ſuppoſe if they pleaſe, that he lived near the place where *Paradiſe* firſt was, or where *Adam* dwelt after his expulſion from that happy abode; but I may as well ſuppoſe the contrary, and that he or ſome of his anceſtors in the courſe of 1600 or 2000 years might have removed far enough from thence to ſome other part of the world, ſo that for aught we know to the contrary, thoſe very animals now peculiar to *America* might have no great way to travel to the Ark. But leaving theſe conjectures, let us ſuppoſe that *Paradiſe*, and the place of *Adam*'s abode, and where *Noah* dwelt and built the Ark were all in the country of *Eden*, and that country lay in *Meſopotamia*, where the moderns place it. Yet there will be no great difficulty to bring animals of every kind to the Ark, ſince we need not believe that they ſo totally forſook the place where they were firſt created, that none of the kind were to be found within ſome thouſand miles of it. We may rather, I think, ſuppoſe, that ſome of every kind would remain in or near the place where they were firſt brought forth, or otherwiſe that God who had determined the deſtruction of the world 120 years before the Deluge came, and *known unto whom are all his works from the beginning*, could have brought every kind of animals to the place of the Ark (in whatever country that was) with

with as much ease, as a shepherd can lead or drive his flocks and herds from one pasture to another, for all his creatures *animate* and *inanimate* obey his command and fulfil his word.

As to the other part of the objection, *viz.* "How "the animals which are now peculiar to *America*, "should be able to get thither from the mountains "of *Ararat* where the Ark rested," I have already observed, that both men and animals have found means to travel from the Ark into the most distant parts of the world, though we can no more account for their coming into many parts of the earth, than we can do for their getting into *America*. But it is further urged

3. "That if those creatures which are now pe-"culiar to *America* had come originally from the "Ark of *Noah*, how comes it that they have left "no traces of themselves behind in any part of the "world through which they made their passage?" To this I answer, that though there be some kinds of animals in *America* (though not so many as is imagined *) as are not now in the other parts of the

* If by the *unknown serpents in Brazile* mentioned in the quotation, the author means serpents of a prodigious size, such are not peculiar to *Brazile* nor to *America*, there are those of no less bigness in the *Indies*. In the Island of *Java* there are serpents of a prodigious length and bigness, one being taken at a certain time that was 13 yards and a half long, and so big that they found a young *boar* in his belly. The like are also in *Congo* and *Angola*. Even one bigger was about the river *Ganges* which did much mischief, devouring even men. Huge serpents or dragons also were in the Deserts of *Egypt* and *Syria*. Near the river *Bragada* in *Africa*, the Roman Consul encountred with a serpent of 120 foot long, which he slew not without loss of many soldiers, being driven to use against it such engines of war as served properly for the assaulting of towns.

But if by that expression is meant the *rattle-snake*, the same is found, if I am not mistaken, in other parts of *America*, though I think there only. But this argument of our authors if it proves any

the earth, that is no proof that there were none ſuch formerly. Many cauſes might concur to the driving animals from one country to another, or elſe totally deſtroying them. None of all thoſe creatures peculiar to *America* are ſerviceable or beneficial to mankind, but the contrary. What wonder then is it, that when lands came to be inhabited and full of people, men ſhould endeavour to deſtroy all ſuch noxious creatures as much as they could? Or that ſuch ſhould ſubſiſt in *America*, where the natives for the moſt part had no ſettled habitations, but removed from place to place as their occaſions ſerved, where there are vaſt woods and great tracts of land uninhabited, where all ſuch creatures may live undiſturbed. This we know, for inſtance, that there are not now, nor have been for ſome centuries paſt, any *wolves* in *Great-Britain*, but we know too that this Iſland was before exceedingly peſtered with them. In like manner ſome animals are known to have been formerly in ſome countries where now there are few or none.

4. It is ſaid, "that ſome animals cannot live out "of the particular clime wherein they are, *&c.*" Now ſuppoſing this was true, which I think it is not, ſince we find that many foreign animals from very different parts both hotter and colder than our climate, are brought into this and other neighbouring countries and do yet live though under confinement; ſuppoſing it true, it will not neceſſarily infer that every land had its animals from the firſt Creation, ſince it may be otherwiſe accounted for, *viz.* from the *power* of cuſtom. For let it be conſidered

any thing, will prove too much. It will prove after the ſame manner that neither were *Aſia* or *Africa* ſubjected to the Deluge, ſince there are birds and beaſts peculiar to each of them, and no where elſe to be found.

1. That

1. That the posterity of *Noah* first settled in the Plains of *Shinaar* about *Babylon*, but when upon the confusion of tongues they dispersed, they by degrees, and in time, spread themselves over all the earth, and even into those parts of it, where one would think they never could have endured the extreme cold which reigns in them, as in *Lapland*, *Siberia*, *Iceland* and *Greenland*, in which last place the *Danes* or *Norwegians* found natives when they first discovered it. Now so very different are the climates of *Shinaar* and *Greenland*, that it can scarce be imagined, that mens constitution could bear those cold and frozen regions, who came from so much a warmer climate. This shews that the constitution of mankind is such, that though it cannot bear the extremes of heat or cold on a sudden, yet by degrees it may be inured to either. And though to transport the inhabitants of *Guinea* to *Iceland*, or *vice versa*, they could not live on so great and sudden a change, yet by slow removals and long intevals (as the progress of mankind was from the center of the most distant parts of the earth) they can accustom themselves to any climate in time. The same I say as to the animals, which bringing a natural covering with them into the world, and being thereby better fenced from the cold than man, and being also better able to shelter themselves from heat by retiring in the day time into woods, caves and dens, and ranging for their prey in the night, though they could not perhaps live in a contrary climate on a sudden, yet by degrees may be inured to any. All that this argument proves then is, that *custom* is a *second nature* both to men and animals.

2. We must therefore distinguish between the *animate* and *inanimate* parts of the Creation. *Vegetables* will not thrive in all soils and all climates indifferently, but require different degrees of heat and moisture according to their specific natures. The

several

ſeveral parts of the earth therefore, according to their diſtances from the *Æquator*, lying under various climates and containing very different ſoils, it pleaſed God to furniſh every country from the beginning with vegetables, plants and trees proper to the clime and ſoil; but not ſo with men and animals, who being not fixed to a place as plants, could extend themſelves to all the diſtant parts of the earth, and by degrees accuſtom themſelves to any climate. Beſides the ſeveral tribes of animals are endowed with a wonderful ſagacity or inſtinct to diſcover their proper food, and the place fitteſt for their abode; as alſo to ſhun their particular enemies, whether men or other animals. But

4. There is I think a ſtrong proof that there are no animals in *America*, but what came originally out of the Ark ariſing from their numbers. Had that large continent been furniſhed with its own peculiar animals from the firſt Creation (as is ſuppoſed in the Objection) and had no men inhabited there before the Deluge, nor yet *America* been ſubjected to the Deluge, (as is likewiſe ſuppoſed) then in that caſe, animals there of all kinds muſt have increaſed and multiplied in that ſpacious continent to ſuch infinite numbers, as to have almoſt covered the face of the earth; and yet it does not appear, that animals of any kind are more numerous there than in many other parts of the world; *Buffaloes* alone excepted, which lived unmoleſted in the vaſt woods and uninhabited lands above *Buenos-Ayres*. Of theſe it is reported that a wandering traveller might fall into a herd of 50,000 of them, from which he could not extricate himſelf in three days. But to ſuch a number might they have increaſed (unmoleſted as they were) though but one ſingle pair had been brought thither 2000 years after the Flood. The *Spaniards* indeed have made good riddance of them ſince, for having ſet up a traffick for their hides only

only at *Buenos-Ayres*, leaving their carcasses to be devoured by the wild beasts and ravenous fowls, they have through coveteousness so reduced their numbers as almost to destroy the brood, to the great injury of the now civilized natives, who being by the *Missionaries* brought from their hills and woods into more convenient habitations and formed into societies, stood in great need of them for their Winter provisions.

With respect to the point we are now upon, *viz. America*, Mr. *Woodward* in his Essay towards a natural History of the Earth promises to close up, Sect. 2. of Part. III. with a discourse concerning the *migration* of nations after the Deluge, and to make out, 1. Who they were who first peopled *America*. 2. When they departed thither. 3. What course they took, and by what means both men and beasts as well serpents and the other noxious and more intractable kinds of them, as the more innocent and useful got thither. 4. Whether there remain any certain *vestigia* or tradition in the writings of the ancients about these *Americans*, and what country they intended under the name of *Atlantis*. 5. Whether the *Phænicians*, or any other nation in old times, maintained anciently any commerce or correspondence with them. 6. How it happened that both the inhabitants of that and of our world, lost all memory of their commigration hence. 7. Whence arose the difference in person, or in the external shape and lineaments of the body, in language, in diet, and manner of living, in arts and sciences, in customs religious, civil and military betwixt those *Americans* and their old relations in *Asia*, *Europe* and *Africa*. With animadversions on the writings of *Grotius*, *De Laet*, *Hornius*, and others on this subject. (p. 165. 2d. Edit.)

These are all curious particulars and would have fully exhausted the subject; but whether he was

able to make them all out at the time, or only set them down with an intention to search afterwards into them, I know not; but should think, that if he was able to give a satisfactory account of these important subjects, from the writings of the ancients, and modern discoveries and relations of those regions, some learned and inquisitive person might be able to do the same. Such an undertaking would enlarge the History of mankind, and give a further insight into the ancient manners and customs of the world.

SECT. V.

A Recapitulation of the answers to the several arguments against an Universal Deluge brought from the state of America.

THOUGH I have insisted somewhat largely on the subject of animals in the preceding section, because it appears to be the main difficulty with some learned men, to their admitting a Deluge universal in extent, and to have inclined even our learned *Stillingfleet*, as well as *Mercator* and others before him, to think that *America* was not subjected to the Deluge, yet I judge it may not be amiss to reduce the answers given to the arguments brought from *America* into a narrower compass, and place them in one short view for the reader's consideration.

In order to make it probable that *America* was not subjected to the Deluge, four things are first supposed, which are

I. "That all the animals were created for the use "and service of man."

The answer to this assertion is, 1. That it is very evident, that they were not created *solely* for the use and service of man, since many times they prove pernicious and destructive to him.

2. Had

2. Had they been created *solely* for the use and service of man, what occasion was there for any animals in *America* before the Flood, when according to the same authors, *America* was not inhabited before and could not be for many ages after the Deluge.

II. "That every Land or Continent had its own "peculiar animals from the first Creation." To this it is answered,

1. That though the earth was chiefly designed for the habitation of mankind, who were to replenish the whole in due time, yet there were no more than one man and one woman created at first, much more then was one pair of each kind of animals sufficient for stocking the earth, which breed much sooner and multiply much faster than men do.

2. That if every Land had had its own animals from the first Creation, they would in 4 or 500 years, while mankind were but few in number, have increased to such an immense multitude, as men could not have subsisted for them, there being at that time nothing the food of man, which was not eaten also by some or other of the animals.

III. The third is, "That some kinds of animals "cannot live out of that climate in which they are "bred." To this it is answered,

1. That custom is a *second* nature to animals as well as to men, who though they cannot bear sudden removals from one extreme to the other, yet by degrees and intervals can inure themselves to any climate in time.

2. That animals from many different parts of the world are brought into *Europe*, and live in this and other kingdoms though under confinement.

IV. "That as *America* is supposed not to have "been inhabited before the Flood, there is no "reason to think it was subjected to the Deluge." To which it is answered

1. That it is more than probable that *America* was inhabited by mankind before the Deluge, because the other *Hemisphere* alone could not have maintained the vast numbers of men that were on the earth.

2. That though *America* had not been inhabited before the Deluge, yet it must necessarily have been subjected to the same fate with the other continents, because it is naturally impossible that the waters could have risen 15 cubits above the highest hills in any continent without overflowing the others equally. Again

From the state of *America*, which is separated from the other continents by vast oceans on one hand, or unpassable mountains on the other, and in which there are several animals, which are not to be found in the other continents, the following objections are raised.

1. "The distance and situation of *America* considered, how could any of those animals peculiar to that continent travel to the Ark of *Noah*, in order to their preservation, particularly that creature called the *Ignavo* or Sloth, which by report can scarce make 50 paces in 24 hours?"

2. "How should they be able to travel back again into *America* from the Ark of *Noah* over unpassable mountains, or pass those vast oceans that lie between, without the help of man?" And

3. "If indeed they came originally from the Ark of *Noah* how comes it, that they have left none of their kind behind them in any place, through which they have passed?" To these objections it is answered

1. That there is nothing singular in the case of *America*, its having animals of several kinds peculiar to itself, and not elswhere to be found. The same is true of both *Asia* and *Africa*, which have each of them peculiar animals that are no where else;

every species of animals not being designed for every place, but some for one country and climate, and some for another according to their several natures.

2. That though *America* be now separated from the other continents by vast oceans or unpassable mountains; it might be quite otherwise before the Flood, which has made very great changes in the face of the earth, especially with respect to the oceans, as will appear hereafter. Before that, the communication might be easy between *America* and the other continents.

3. That though we are told where the Ark rested, *viz.* on the mountains of *Ararat* *, yet it is not said where it was built, or where *Noah* lived that built it, which might be far enough from the place where it is commonly supposed; so that those animals which are peculiar to *America* might not have so far to travel to the Ark as is imagined. Why should we then form all our schemes about the Ark and the animals, with respect to one particular place, when there is not the least certainty, in what country it was that *Noah* lived? But

4. In whatever part of the earth *Noah* lived, and the Ark was built, it was at God's command that the several kinds of animals came thither in order to their preservation; and his command could bring them from the fartheſt parts of the earth, during the 120 years that the world lay under the sentence of condemnation. If it should be said, this would infer an extraordinary power out of the ordinary course of nature, the Reader has my free leave to conclude it thus to have been effected, since we have

* *Ararat*, according to St. *Jerome*, is a champaign country incredibly fertile, through which the *Araxes* flows at the foot of mount *Taurus*, which extends itself to that plain. Wherefore by the mountains of *Ararat*, on which the Ark rested, are not to be understood the mountains of *Armenia*, but the highest mountains of *Taurus* that overlook the plains of *Ararat*.

ſeveral inſtances in Scripture of the like kind, where *lions*, *bears*, *ravens* and *whales* obeyed his word, and executed the commiſſion he gave them. And how ſhould not the like word be obeyed by all the animals, in this extaordinary caſe of *univerſal* concern, as by ſingle animals in ſome ſingular and private concerns? But after all, none of the animals might have ſo very far to travel to the Ark; for if one pair only of each kind was created at firſt, as we have given ſufficient reaſons to believe; and all thoſe in, or near one place, ſince they were all brought before *Adam*, and received names from him, there is no abſurdity in the ſuppoſition, that ſome of every kind might remain in the country where they were firſt produced, from whence *Noah*'s habitation might not be many hundred miles diſtant.

5. That ſome kinds of animals have been formerly in places and countries, where now there are few or none at all; as abundance of *deer* in *Switzerland*, when full of woods, now few or none, as is reported; and in *England* where in one reign all the *wolves* were deſtroyed, which before peſtered the nation. Few or none of thoſe creatures peculiar to *America* are uſeful or beneficial to mankind, what wonder then that ſuch ſhould be hunted and deſtroyed in places well inhabited, and yet remain in the vaſt woods or uninhabited lands of *America*? Even as monſtrous ſerpents or dragons, and other ſtrange animals in the wilds and deſerts of *Africa* and *Aſia*.

6. That as both men and animals have found their way into all the diſtant countries and iſlands of *Aſia*, *Europe* and *Africa*, and even into ſuch cold regions, where it may be thought no men could live, though they be ſeparated by ſeas, lakes, rivers, deſerts, mountains and vaſt woods, ſo might they find their way into *America*, which it is highly probable is joined to the other continents and which

was

was certainly intended to be inhabited as well as the rest of the earth, though we know neither when or how, nor at what different times men or animals got thither: But what has not yet been discovered, may in time, as many things formerly unknown have since been found out.

7. That it is in vain to form an objection against the extent of the Deluge from the difficulty of accounting for the passage of animals into *America*, when the same objection lies in a manner as strong against the passage of mankind thither. And yet they who make this objection acknowledge that the inhabitants of *America* are sprung from those who came first out of the Ark. Now could they tell us, when and by what means, and at what times mankind came thither, then might we be able to tell them also, by what means the animals came thither.

8. That most probably, serpents, ravenous birds and wild beasts have passed to *America* over those mountains of *Tartary*, by which it is joined to *Asia*; but that other animals have been transported thither by mankind; and such as they did not transport, were not there to be found till brought by the *Spaniards*, and other *Europeans* *: and as in those large *groupes* of islands lately discovered in the *East-Indies*, there were no fourfooted beasts nor tame fowl.

CHAP.

* In insulis fortunatis, & in his quae nostra aetate sunt inventae, multa animalium genera, quae inter nos sunt frequentissima, omnino nulla erant, itaque importata sunt, quemadmodum in stirpium generibus quotidie usu venit, ut semen aut surculus aliquis ab aliis ad alias gentes transferatur. *Lud. Vives.*

America had very few of such creatures as *Europe* yieldeth until they were transported thither, and therefore they have no *Indian* names for them, but those which the *Spaniards* that brought them gave unto them, as horses, kine and such like. Of fowls they have many kinds as we have, partridges, turtles, pigeons, stock-

CHAP. IV.

Sect. I. *How the earth could maintain so great a number of men and animals as were upon it before the Deluge.*

THE learned Mr. *Derham* hath judiciously remarked, "That the whole surface of our "globe can afford room and support only to such a "number of all sorts of creatures. And if by their "doubling, trebling, or any other multiplication "of their kind, they should increase to double or "treble that number, they must starve or devour "one another. The keeping therefore the balance "even is manifestly a work of the Divine Wisdom "and Providence †"------ But now we have made the number of mankind, that were, or might have, by the ordinary course of nature, been upon the earth 200 years before the Deluge came, so immensely great that it will be thought impossible that the earth could afford sufficient maintenance for such multitudes, besides the numerous tribes of animals that were upon it. And this difficulty will be further increased, if it be considered

1. That no animal food was then eaten. And this is the reason, why I said before, that the *Antediluviens* could not have lived in great cities containing some hundred thousand inhabitants, as men do now, since a very large tract of ground for the fruits

doves, quails, faulcons, herons, eagles, and a world of parrots, hens they had before the *Spaniards* arrived. *Purchas.*

The useful, domestick kinds of beasts, as bulls, cows, horses, and goats in *Virginia* were transported from *England*, and so by the *Spaniards* into other parts of *America*. Idem.

There were no *elephants* nor *rhinoceros* in *America*, which are numerous in *Asia* and *Africa*.

† Physico-Theology, p. 169.

of

of the earth, and very widely extended had been requisite to the maintenance of so great numbers in one place, which would have proved greatly inconvenient.

2. That a much larger quantity of food was necessary to the *Antediluvians* than for men now a days: That strong and robust constitution of theirs which held out to eight and nine hundred years would require it. Besides it is highly probable that they were men of a larger stature than the human race most commonly is at present, and consequently would require a proportionable quantity of food. I do not mean that they were all of a gigantic size, for that was extraordinary even then, but that they were of a larger stature than the present race of mankind, and that as between 5 and 6 foot is the common size now, 9 or 10 might have been the ordinary measure then. Even now in *America* there are some savage nations of a much larger stature than the *Europeans*. When *Ferdinand Magellan* wintered in those *Streights*, which from him have taken their name, a native of the place was brought to him, to whose girdle a man of a low stature indeed only reached, and who seems to have had an appetite proportionable to his stature, for he died in the voyage for want of sufficient food, which they could not spare.

In *Candish*'s Voyages it is said that our men measured the print of men's feet 18 inches in the sand, and *Knivet* writeth that he saw footings at *Port Desire* as big as four of ours, and two men newly buried, one of which was 14 spans long, and a young man who was yet above 13 spans high. Now allowing two spans to a cubit, the man newly buried was 7 cubits or 10 ½ feet in height, and the young man was not yet come to his full stature; but if they really saw footings four times as big as ours, and the body was in proportion (as *ex pede Herculem*) such men must have been *giants* in a gigantic nation, about

about 24 foot high. But however that is, the very large ſize of the natives there is confirmed by other relations. The *Hollanders* carried away four boys with them, one of which learning their language, told them of three tribes in thoſe parts of ordinary ſtature, and of a fourth which were giants of ten or eleven foot high who warred upon the former. The ſame has alſo been confirmed by ſome of the Miſſionaries ſince, while the ſhips lay ſeveral months in thoſe ſtreights by bad weather. That the ſtature of mankind was larger both before and after the Flood ſeems apparent from the meaſure of the cubit. We reckon it a foot and a half or 18 inches, Now 18 inches is the cubit of a man about ſix foot. But ſeveral learned men have ſhewn that the ancient cubit was ſomething more than 21 inches; but 21 inches and ſomething more may be the cubit of a man of 9 or 10 foot high. Whence I think we may infer that the ſtature of mankind both before and ſeveral ages after the flood was greater than it is now, and conſequently that a larger quantity of food was required to ſo much larger bodies. This was certainly the opinion of the ancients, as beſides other evidences appears from that line towards the end of *Virgil*'s firſt book of *Georgicks*,

Grandiaque effoſſis mirabitur oſſa ſepulchris.

Several learned men are, I know, of another opinion, and think that mankind have ſuffered little or no diminution in their ſtature ſince the beginning. They might with as good reaſon ſay, that mankind had ſuffered no diminution in their years or term of life ſince the beginning. The arguments they go upon are theſe. 1. "That the ſtature of mankind "now is the ſame as it was 1000 or 1500 years ago, "that our Queen *Elizabeth*, for inſtance, was of "the ſame ſtature with *Julius Cæſar*." They might have gone back 500 years more from his days and perhaps

perhaps found it much the same then as now. For I reckon that the stature of man and the age of man bore some proportion to each other, and that as after the Flood man's years were by little and little reduced to the present standard, so was also his stature. 2. "That if we suppose mankind to have "been of a much larger stature before the Flood, "we must also suppose the animals to have been so "much larger and taller in proportion, else they "could have been of no service to men; for in-"stance, how should horses of the ordinary size "now have been able to carry men of 10 or 12 foot "high?" Now though I see no great reason for allowing this supposition, yet I see no great inconvenience in granting it. 1. I see no great reason to allow it, because mankind might then be of a larger stature, but the animals much the same as now. I find not the least hint that the animals about the Streights of *Magellan*, nor yet in other parts of the world where men are of a gigantic size, are any thing different from what they are in other parts, saving only the difference that may arise from their pasture, which may make a considerable difference in the size of animals; for instance, how much larger are the cattle in *Holstein* and *Denmark*, than those that come from the Highlands of *Scotland*, and how much larger are the *mares* in *Flanders*, than the Manks horses. 2. That horses of the present size could not well carry men of the size I suppose the *Antediluvians* to have been, I readily grant, but the question is, whether the *Antediluvians* used horses for riding and travelling as we do now? I rather think they did not, and that the way of travelling then, as it was for many ages after the Flood, was much on foot, but for riding and carrying heavy burdens they had *elephants*, *camels* and other beasts of great strength. I find no instances of horses used either for riding or war in the days of *Abraham*, *Isaac* or *Jacob*,

Jacob, though there were horſes for chariots in *Egypt* in the time of *Joſeph*, but for journeying, *camels* and aſſes of which they had plenty, the aſſes in thoſe countries being of a much larger ſize than thoſe with us, and of much greater value. But then again neither do I ſee any great inconvenience in granting that the animals in the *Antediluvian* world were of a larger ſize than they are at preſent. So far as the more luxuriant fertility of the primitive earth would make them ſuch, they would undoubtedly be ſo, as we have obſerved the different ſize of animals at preſent, according to the different paſtures and climates they are bred in; nor need we fear room enough for them in the Ark, eſpecially as to their height, the point now in queſtion. I know not whether we might not make ſome conjecture, (and it will be but gueſſing at beſt) of the ſtature of mankind from the dimenſions of the Ark, which being given by that Wiſdom which orders all things in number, weight and meaſure, would neither be greater than was neceſſary, nor leſs than was convenient. The height of it was 30 cubits, and that height divided into three ſtories, allowing a cubit for the thickneſs of each of the floors (though perhaps the bottom or ground floor would require more) there would then be left 27 cubits, or near it, that is 9 cubits or $\frac{13}{18}\frac{1}{2}$ feet to the height of each ſtory. Now as it would have been vaſtly inconvenient for *Noah* and his family who had occaſion every day and ſeveral times in the day to be in each of the ſtories, had the ſtories been ſo low as that they muſt have ſtooped all along; ſo on the other hand, had the men been no taller than 6 foot high, as men are now, the height of the ſtories at 13 foot or $13\frac{1}{2}$ ſeems very diſproportionate, and the height of the Ark much more than was neceſſary; whereas if we ſuppoſe them 10 foot high, the remaining $3\frac{1}{2}$ feet gave ſufficient room for free air, both to them and the

the animals. Let us now hear what Sir *Walter Raleigh* saith on this subject in his account of *Sicily*.

" It may perchance seem strange to the reader, " that in all ancient story, he finds one and the same " beginning of nations after the Flood; and that " the first planters of all parts of the world were said " to be mighty and Giant-like men; and that as " *Phœnicia*, *Egypt*, *Lybia* and *Greece* had *Hercules*, " *Orestes*, *Antæus*, *Typhon* and the like, as *Denmark* " had *Starchaterus* remembered by *Saxo Grammaticus*; as *Scythia*, *Britany* and other regions had " giants for their first inhabitants, so this Isle of *Sicily* had her *Lestrigones* and *Cyclopes*. This discourse I could also reject for feigned and fabulous, " did not *Moses* make us know that the *Zamzummims*, *Emims*, *Anakims* and *Og* of *Basan*, with " others which sometime inhabited the mountains " and deserts of *Moab*, *Ammon* and Mount *Seir*, " were men of exceeding strength and stature, and " of the races of Giants; and were it not that *Tertullian*, St. *Augustine*, *Nicephorus*, *Procopius*, *Isidore*, *Pliny*, *Diodorus*, *Herodotus*, *Solinus*, *Plutarch* " and many other authors have confirmed the opinion; yea *Vesputius* in his second navigation to " *America*, hath reported that himself hath seen the " like men in those parts." * *B. 5. Ch.* 1. *S.* 4. § 1.

Now

* " There is a manifest alliance and congruity observable in " nature between the stature of man's body, and his age, during the time of his growth, whence the Greeks thought it not " improper to express both these by ἡλικία, which signifies promiscuously *stature* as well as *age*. And as 5 ½ feet may well " be esteemed the most settled and ordinary degree of *height* in a " man, so about 70 years may justly be allowed the most common period of his *age*; yet daily experience and observation " acquaint us with those that vastly exceed these limits in both " these respects: and as we have certain history that informs " that the youngest of these, *Thomas Parr* and *Henry Jenkins* " both of *England*, and the old Countess of *Desmond* and Mrs. " *Eccleston* both of *Ireland*, fully compleated double that usual term

Now whence could it come that the first planters of all nations were men of gigantick stature, but from hence that they were sprung from those *Antediluvians* that were of like stature, and that even *Noah* and his sons were of much greater stature than men are at present.

Hitherto we have instead of removing, only increased the difficulty of the earth's furnishing sustenance for such immense multitudes of men and animals as were upon it before the Deluge, we must therefore in the next place endeavour to solve it. But here, I think, it will be first of all necessary to trace this matter to its source, and to consider particularly the food that was appointed both for men and animals before and after the Fall, which shall be the subject of the next Section.

" term of life; so we have no reason to question the accounts " given us of others that have been found in *stature* double the " common standard of man. Nay both these properties *longe-* " *vity* and *high stature* do so naturally result each from their " proper causes, that they are often observed to become heredi- " tary and run in whole families; whence the Greeks had their " μακρόβιοι, and the Romans their *Celsi*, and in *Palestine* of old, " they had their *Anakims* or sons of the Giants. So that hu- " man gigantick bodies are no way inconsistent with the course " of nature. And indeed we have some clear testimonies given " us by authors of unquestionable credit and veracity, that there " actually have been men in the world, and likely still are, of so " large a bulk, and so high a stature of body, as properly to de- " serve the name of Giants."—— And after giving some instances of such both antient and modern, he adds,—— " from " these warrantable histories, we may clearly deduce that there " have been in nature human bodies of 11 and 12 foot high." Dr. *Th. Molineux*. *Lowthorp*'s Abridgment, Vol. 3. p. 6.

The same Dr. *Molineux* by measuring an *Os frontis*, in the Medicine School at *Leyden*, found that the man to whom it belonged must have been 11 or 12 foot high. *Ibid.* Vol 3. p. 2.

SECT.

SECT. II.

Of the food of men and animals at the beginning and after the Fall to the time of the Deluge.

HOW necessary food is to the support of men and animals in this their present state on the earth we need not be told, since we sensibly feel that necessity, and *Moses* has given us a particular account of that food which was appointed for *each*, and it is this. And God said (to man) *Behold I have given you every herb bearing seed, which is upon the face of all the earth, and every tree in the which is the fruit of a tree yielding seed, to you it shall be for meat: And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein is life* (or a living soul) *I have given every green herb for meat* *. Now we cannot doubt but that the food here appointed both for man and animals was sufficient for their support and maintenance, and that no more would have been necessary for man had he continued in his state of innocence. They who think that mankind fed on *animal* food from the beginning, and that the grant of this was included in that dominion which was given to man over all the other creatures in these words-------*and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth*, † would do well to tell us, that if this was the case, what occasion there was to renew this grant after the Flood, and to add, *every moving thing that liveth shall be meat for you, even as the green herb, have I given you all things* §. This surely implies that the green herb and fruits of the trees were

* Genes. i. 29, 30. † Genes. i. 28.
§ Genes. ix. 3.

all

all that was granted to man at firſt, but now over and above that, was added the grant of *animal* food. For in a deed of gift all is ſpecified that is given or granted, and whatever is not expreſly mentioned, is excluded or not given. Here man's food is appointed and ſpecified, what is not expreſly mentioned is therefore reſerved and not granted. Beſides this grant or appointment of man's food reſpected not *Adam* only but all his poſterity till an additional grant was made. And if mankind before the Flood made bold to eat animal food, they exceeded the grant made them, but it is a ſtrong argument, I think, that they did not. That after the Flood God was pleaſed to make them a new grant of animal food, which conſidering the change that the Deluge had made in the Earth, when men began to multiply, would be needful for them, which before that it was not, and therefore not given.

But what is then meant by that Dominion which was given to man over all the creatures, if they were not for food? The animals though they were not deſigned for food at firſt, as not then wanted, yet were uſeful and ſerviceable to man in many reſpects as will appear. But as moſt of thoſe who are ſervicable to him are either ſtronger or ſwifter than he, others again are deſtructive to him. He could neither have made uſe of the one, nor defended himſelf from the injuries of the other had not an impreſſed love of man been laid on the creatures.

To the animals no further grant was made than at firſt, but to man another was made immediately after his Fall and expulſion from *Paradiſe*, implied in theſe words. *In the ſweat of thy face ſhalt thou eat bread, till thou return unto the ground.* This was in truth a puniſhment for his tranſgreſſion, as well as a grant of other food, but yet what was now become neceſſary to him. *Paradiſe* was no doubt planted with the moſt excellent fruits, ſufficient to have ſuſtained

sustained his life in health and vigour in his innocent and happy state; but after his transgression, being thrust out from that happy abode, and having then only the fruits of the common earth to feed on, which were not so nutritious as those of Paradise, he stood in need of something else to sustain life, and therefore bread produced by culture and other preparations for his food was now added, which before was not necessary, and thence called *the staff of life.* This seems a plain reason why bread was added after he came to live on the common earth, though perhaps another reason also for that addition may be given from the change that happened in man's body after his fall, which we may have occasion to take notice of in another place. Bread being now become the staff of life, *Cain* the first man born, became a tiller of the ground or an husbandman, as the next in birth *Abel*, became a keeper or feeder of sheep.

But though Sheep are only mentioned, yet the occupation of a *Shepherd*, was to look after herds of cattle as well as flocks of sheep. When five of *Joseph*'s brethren were presented before *Pharaoh*, and asked their occupation, they answered *thy servants are Shepherds, both we and our fathers*, yet it is certain they had numerous herds of cattle as well as large flocks of sheep, as appears by their history, and by the noble present of both kinds which *Jacob* made to his brother *Esau*, likewise from *Joseph*'s speech to *Pharaoh*, *My father and my brethren and their flocks and their herds, and all that they have are come out of the land of Canaan, and behold they are in the land of Goshen*; and from what *Pharaoh* said to *Joseph*, *If thou knowest any men of activity among them, make them rulers over my cattle.* But the flocks of sheep and goats being more numerous than the herds of cattle, and requiring greater care and watchfulness to defend them from the wild-beasts, the name

of the office was taken from the principal care, *viz.* that of the flocks.

Abel's becoming a ſhepherd then in the full extent we may ſuppoſe of the office, looks at firſt ſight as if mankind fed on animal food from the beginning, and is no doubt the reaſon of many learned men's embracing that opinion; but as I have before given reaſons to believe the contrary, I muſt ſhew what reaſons there might be for ſuch an employment ſo early. Now the firſt and moſt obvious that occurs is, the neceſſity of providing animals for ſacrifice. That ſacrifices were of *human* invention and not of *divine* inſtitution, as ſome learned men contend, I can never perſuade myſelf. But though this be a matter ſomething foreign to our preſent Inquiry, nevertheleſs as the learned *Bochart*, and others ſince who allow the divine Inſtitution of animal ſacrifices, do alſo believe that animal food was granted to mankind from the beginning, it will be neceſſary to conſider the reaſons given for that opinion; and this is *a-propos* to our preſent ſubject. The argument of *Bochart* is to this effect.

"That as ſacrifices were in uſe before the Flood, "ſo was the eating of fleſh, for that *Abel* would not "have offered that to God, which he believed un-"lawful to eat of; and it had been in vain for him "to have fed lambs, which he could not himſelf "make uſe of. But the very diſtinction between "*clean* and *unclean*, ſhews that ſome were permitted "and others forbidden, ſince by their own nature, "there is nothing unclean in animals, but that is "unclean which is forbidden by the law. And "therefore what is ſaid *Geneſ.* i. 29. *To you it ſhall* "*be for food*, we refer not only to plants, but alſo "to animals, whereof mention is made in the verſe "preceding"----- Now to this I anſwer

1. That in the account of the Creation given by *Moſes* the animals are firſt created, and upon conſultation,

sultation, man after them. After man's creation his food is distinctly appointed him, and that also of the animals as distinctly. Now it would be strange if animal food should be included in the grant to man, when it seems expresly excluded, there being not the least mention made of it, which one would think could not have been omitted, had it been granted.

2. If animal food was included in the original grant of absolute dominion over all the creatures (which man's superior reason in some measure gave him) what occasion was there for making this grant in express terms after the Flood? The same blessings which were given to *Adam* the parent of the first world, were renewed to *Noah* the parent of the second, *to be fruitful and multiply and replenish the Earth*, the same dominion given him over all the creatures, not in the same words indeed, but in words equivalent; and yet the grant of animal food is made in express terms over and above. This I think clearly shews that it was not included in the original grant of food, but now first superadded.

3. That the distinction between *clean* and *unclean* solely respected animals offered in sacrifice in the *Antediluvian* world is evident from hence, that *Noah* upon his coming out of the Ark *took of every clean beast and of every clean fowl, and offered burnt offerings unto the Lord*; * and that upon the grant of animal food to him and his posterity, which was posterior in time to the sacrifice, there is not the least mention of any distinction between clean and unclean with respect to food, but the very contrary, since the grant runneth, *Every moving thing that liveth shall be meat for you, even as the green herb have I given you all things* †. That distinction of *clean* and *unclean* as to food, came in with the Law of *Moses*, and was dif-

* Genes. viii. 20. †. Genes. ix. 3.

ferent from that of ſacrifices, there being ſeveral creatures clean for food which were not to be offered in ſacrifice.

4. I can perceive no neceſſary connection between theſe two, of man's offering unto God and of his eating the ſame things, or why men might not offer unto God, that of which they might not eat, if in the one caſe it was commanded, and in the other not granted, as not yet needful for man's ſupport. By the Law of *Moſes* ſeveral things might be offered and dedicated to God, which man neither did nor could eat of.----But neither were the animals offered in ſacrifice of no uſe to man's bodily life; for as the firſt cloathing of *Adam* and *Eve* was made of ſkins (probably of thoſe beaſts which were offered in ſacrifice) ſo might that be the chief cloathing of mankind for many ages or till the Flood, yea and long after it too, as it is of the wild *Americans* to this day. Here then we ſee a ſufficient reaſon for the office of a ſhepherd as well as of an huſbandman after the fall.

But it is further urged "That there could be no "merit in making offerings unto the Lord of that "which coſt them nothing." To this I anſwer, that the merit lay in giving obedience to the divine Inſtitution. Nor can it be ſaid, they offered of that which coſt them nothing, ſince they were obliged to tend and take care of ſheep, goats and cattle for the purpoſe of ſacrifices, which 'tis highly probable were offered every Sabbath day, that being the inſtituted mode of worſhip. And this tending and taking care of herds and flocks * made thoſe creatures as much their own, as the ſame care made the flocks and herds of the Patriarchs after the Flood, and of the *Iſraelites* under the law their own, and ſo were fit to be offered unto God, as being in this

* *N. B.* All animals offered in ſacrifice were of the domeſtick kind, as bullocks, calves, lambs, kids, pigeons and doves.

ſenſe

sense their own, though in a higher sense all the creatures are God's. To have offered any animals of which they had taken no care, but might perchance meet with amongst those that went wild, had shewed great disrespect and contempt of the divine Institution. And for this very reason the office of a shepherd became necessary immediately after the fall of man; and both these employments, that of tilling the ground for his sustenance, and that of a shepherd of flocks and herds for sacrifices, were incumbent on *Adam*, till his son grew up to ease him of that burden and partake of the trouble.

Again it is alledged "That unless men had eaten "animal food themselves they could not have di-"stinguished between the fat and the lean, or be-"tween the good choice pieces and others."---- There is no distinction between the good choice pieces and others in any account of the *Antediluvian* world.----The distinction between fat and lean beasts is easily known to those who are conversant about such matters by the eye or by feeling. The most thriving animals are the fattest and the best; and the best of any kind is the fittest to be offered unto God who gave all, and therefore *Abel* brought for an offering, *of the firstlings of his flock and of the fat thereof*, that is, of the fattest and so the best *.

But though from the answers given it appears, that the arguments brought for mens eating animal food before the Deluge be of no force, yet they may have but little weight with those who regard names and authorities more than *reason*; and as great men have often great singularities, so the great *Grotius*, on the supposition that animal food was not included in the original grant of absolute dominion given to mankind over all the creatures, attempted to explain away all animal sacrifices before the Deluge; and

* De primogenitis gregis sui, & de adipe eorum. *i. e.* Iisque pinguissimis. *Hypallage Rhetorum. Jun. & Trem. in locum.*

that *Cain*'s oblation was of the turf of the Earth; and *Abel*'s of the wool and milk of the flock. But as great a name as *Grotius* deservedly has, I can yet oppose a greater name than his to the contrary, *viz.* that of *Moses*, who relates that *Noah* builded an altar unto the Lord, and took of every clean beast and of every clean fowl, and offered burnt offerings upon the altar. Now *Noah*'s sacrifice upon his coming out of the Ark (for which no command is given) is only to be accounted for, by its being the establish'd mode of worship in the *Antediluvian* world, and what had been his devout observance before: and that it was the establish'd mode of worship from the beginning appears from *Abel*'s offering and the defect of *Cain*'s *. And *Moses* giving an account of the offerings of the first men that were born into the world, attended with many remarkable circumstances was sufficient to shew that it was from the beginning, and he had no need (in his designed brevity) to repeat the same again, till another remarkable occasion offered, *viz.* *Noah*'s sacrifice when the Deluge was over. His mentioning it therefore first at the beginning of the old world, and again at the beginning of the new, is a full evidence of its being the established mode of worship.

But as Error is more fruitful than Truth, others have refined upon this opinion of *Grotius*, and gone lengths beyond him; and a late learned and ingenious author is so far from allowing any kind of sacrifice to be of divine institution, "that he declares "the general notion of the thing itself to be in every "view of it so glaring an absurdity, that he is "amazed that it should ever enter into the head of "any rational creature." But I think there is a yet greater absurdity, which is, to contradict the common sense and reason of all mankind, who have ever thought that God was to be honoured with his own

* See *Kennicot*'s Discourses.

gifts,

gifts, and that the best of the kind, was fittest to be offered to the Deity or employed in his service, and who never approached their superiors without a present, as is the constant custom of all the Eastern Countries to this day; till these latter ages, wherein men have learned to estimate the *goodness* of a religion by its *cheapness*; and who think every thing wasted that is employed in the service of God, but nothing too good or grand for themselves, however extravagant or profuse the expences be. But will God accept of words or compliments (which the most *covetous* may be as liberal of as the most *religious*) as a testimony of honour, when every thing valuable is withheld? Or can we testify the sincerity of that profound respect, which as creatures we owe to the Almighty Creator and Governour of the world, by words or thoughts only, when he has bountifully given us so many other things wherewith to honour him and his service? There is therefore good sense as well as piety in *David*'s prayer at the dedication of his own and the peoples offerings for the building and service of the Temple, 1 *Chron.* xxix. 11. *& seq.* This is all the answer I shall give to this singular notion at present, since the reasons for the divine institution of *animal* sacrifices will come more properly into our third Book, when we enquire into the state of Religion and Morals in the *Antediluvian* World.

Two things I have here endeavoured to defend in opposition to the opinion of some learned men. The first that animal food was not eaten by the *Antediluvians*, at least by the race of *Seth* and other pious sons of *Adam*. In proof of this I have given a reason why, though the descendants of *Cain* should have made bold to transgress the law of their food, yet the posterity of *Seth* and others would not *. But 2dly, I have shewed that no animal food was

* Ch. 1. sect. 3.

eaten by *Noah* and his family during their year's confinement in the Ark *, because there was no provision made for it, since every living creature that was taken into the Ark was ordered to be brought forth when the Flood was over †, it was not eaten by them, because the grant was not made them till after the Flood. And this I think is full to the point.

The second is, that yet notwithstanding, *animal* sacrifices were of *Divine* Institution from the beginning. In proof of this the sacrifices of *Cain* and *Abel*, the one accepted, the other rejected is an argument of some weight. 2. I have shewn that the distinction between animals *clean* and *unclean* before the Flood solely respected sacrifices and not meats. This distinction is first mentioned, when animals were to be taken into the Ark. Again it is observed by *Noah* in his first sacrifice who offered *of every clean beast and of every clean fowl*, and 3dly when the grant of animal food is given there is not a syllable of this distinction with respect to meats but the contrary. Now if the distinction between *clean* and *unclean* at this time, solely respected sacrifices, who should make this distinction, man or God? He that had offended and was the guilty person, or He that was to be propitiated? Reason will surely convince us that it was God who appointed the *mode* of worship and made the distinction. A worship acceptable to God from sinners and offenders must be appointed by God, and could never be left to the inventions of men, who could not in their case know in what manner the offended Deity was to be approached or appeased without his special direction, as a ground of their FAITH in their addresses to the infinite Being; and this I take it, is also fully to the point.

But now in an Enquiry after Truth I must not conceal an argument that may be brought against

* Ch. 1. sect. 3. † Gen. viii. 17.

the

the first of these points, though I have not seen it urged by any one, and it is this. It is said (in *Gen.* iv. 20.) that *Jabal* the son of that *Lamech* who was of the race of *Cain*, was *the father of such as dwelt in tents, and have cattle*, that is, he taught men to erect tents or build cotts in the fields for the better management of herds of cattle, and keeping them together. Here the question is, whether the race of *Cain* (in whom the corruption of the old world began) could offer sacrifice, after he was banished from the place of worship, and of Divine acceptance? If not, what use had they for keeping cattle unless it was for food? I confess, I am of opinion that *Cain* could not offer sacrifice after his banishment, for which I shall give my reason in another place, at least not for a long time, though he might (if truly penitent for his crime) have been allowed that priviledge afterwards; but of this we can be at no certainty, having no light to guide us in our search here. But 2. Many uses might be made of cattle, both alive and dead though they were not eaten, *viz. alive*, for carriages and burdens *&c. dead*, for their skins and horns; as is the practice of the *Spaniards* at *Buenos-Ayres*, who made a great traffick of the skins of *Buffaloes*, though they eat not the flesh, but leave the carcasses to be devoured by the wild beasts and ravenous birds, which happens in a very short time. But it may be objected that "if this was "all the use which those *Antediluvians* of the race "of *Cain* made of the cattle, there was no need of "herding them, and erecting tents in the fields for "that purpose?" The different circumstances of times and persons will shew that that might be necessary in one case which was not in the other. In *America* the natives lived then at many hundred miles distance, till they were civilized by the *Missionaries*, and brought to live in society and community, and nearer to the *Spaniards*. These again were but few, living

living about the ſea-coaſts, and the country above un-inhabited, ſo that the cattle were no man's property. But it might be far otherwiſe in the *Antediluvian* world in the time of *Jabal.* According to the ordinary and regular courſe of nature, *Jabal* who was the ſeventh from *Adam* by *Cain*, might be born about the year 976, and he might be 300 years old ere this improvement of erecting tents in the fields was made, which brings us to the year of the world 1,276. Now by our ſecond Table it appears that before that year mankind was increaſed to above 104 millions; or if *Jabal* may be ſupoſed 400 years old before this invention, which is no unreaſonable ſuppoſition, then was mankind increaſed to above 419 millions, ſo that by that time and even before, it would be neceſſary to have both lands, cattle and flocks in property to avoid contentions and quarrels; and *Jabal*'s invention of erecting tents and cotts in the fields was a good improvement and highly convenient. But flocks and herds might be of great ſervice to mankind though their fleſh was not eaten, for another reaſon which I am now to mention.

I have ſometimes thought that mankind, though they had not yet the grant of animal food, might nevertheleſs uſe the milk of animals, and this in truth ſeemed neceſſary to them. Milk was their firſt nouriſhment while they were babes, and that during five years, which I have ſhewed to be the time of nurſing in thoſe early days, nor could a longer time be well allowed, as mankind was to be propagated, and the whole earth to be peopled. When they were weaned, they were yet but in an infant ſtate, and milk ſtill the moſt proper nouriſhment for them for many years after, and there was an eaſy and natural tranſition from *Breaſt* milk to the milk of cows, ſheep, goats or other animals. This might have been intimated to *Adam*, after the Fall upon the birth of his children, or if you will, it

it might be virtually included in that dominion which was at first given to man over all the other creatures, many of which in this case were of great service to him. There is no express mention of this it is true; no more is there of many other things relating to that old world. For instance, in all the account of the *Antediluvians* there is no mention of prayer; but can we therefore think that holy and righteous men never prayed to God in all that time? *Moses* gives us an account of the Creation of our world, of the animals, and lastly of man male and female, of Paradise and the state of Innocence, of the Tempter, of the transgression and Fall of our first Parents, and thereby the introduction of natural and moral evil into the world, (whereas before, all things were *good* and *the generations of the world were healthful*) of the judgment past on all the offenders, and of God's great mercy in admitting man to a state of penitence, with the intimation or promise of a Redeemer to come, (to keep up their hopes) who should give them at last the victory over their enemy that had deceived them; of the mode of worship established for sinners in their addresses to the Divine Majesty, of the cause of the separation of the first son of *Adam* and his posterity from the others, of the universal corruption which men fell into at last, which *brought the Flood upon the world of the ungodly* and destroyed them all, of a remnant both of men and animals saved in the Ark for the peopling and replenishing the earth again, of whom all the nations in the world are descended, and finally of the time or number of years which elapsed from the *Creation* to the *Deluge*. All these were facts highly convenient and proper for all mankind to know to the end of the world; but almost all other things, which might serve rather for curiosity than real use are passed over in silence, though some of them may yet be discovered by reason from the *analogy* of nature, when there

there is occaſion to illuſtrate the works of God or his Providence over mankind.

Now if the milk of animals was in uſe before the Flood, as for the reaſon given it ſeems highly probable, then was it of great ſervice not only to children and young folks, but would alſo be to aged perſons*, and might be neceſſary beſides in many caſes. Here then we have another reaſon for men's early keeping flocks of ſheep, and herds of cattle, beſides the neceſſity of them for ſacrifices and for cloathing, namely the great uſe they were of to themſelves on account of their *milk*. And therefore, as I have ſaid at the beginning, that I ſaw no great reaſon to allow that even the race of *Cain* did feed on animal fleſh, ſo now, I think, I may ſay that they had no occaſion, and that there is no reaſon to believe that *animal* food was at all eaten by mankind before the Deluge. And as ancient tradition had preſerved ſome memory of the way of life in the firſt ages of the world, which we noted before, *viz.* that the firſt men lived on the plants and fruits of the earth, ſo likewiſe it was believed that at the ſame time they lived alſo on milks, as appears by thoſe two lines of *Ovid.*

Lacte mero veteres uſi memorantur, & herbis;
Sponte ſua, ſiquas terra ferebat, ait. Lib. 4.

But though I have here and in one or two places more quoted *Ovid* and *Virgil* for the tradition of the food and ſtature of mankind in the firſt ages of the world, yet I believe their *veteres* will reach no higher than the firſt *Poſtdiluvians*; for as to the *Antedilu-*

* The time of oblation of the child, and of the alteration of the diet of the old man, is moſt certainly indicated by the beginning and ceaſing of the uſe of teeth. Milk is fit for babes before their teeth come, and old men when their teeth decay again become ſuch as have need of milk and not of ſtrong meat. *Smith's* Portraiture of old Age.

vians,

vians, they and all their works perished in the Deluge, *Sub illo* (Noe) *omnia retro opera quieverunt per diluvium*, as St. *Jerome* expresses it, and all of that world was forgotten in after ages, except what was preserved by *Moses*, from whose writings ancient authors might borrow what they relate of that first world. But though this be the truth of the matter, it is so far from invalidating what I have said of the food of mankind before the Flood, that it is the strongest confirmation of it. For why did men in the first ages after the Flood, live on vegetables, fruits and white meats, but because that was the food of those, who came out of the first world, who still continued the same and brought up their children with it. And though the grant of *animal* food was given immediately after the Flood, yet is it very probable that neither *Noah* nor his sons &c. made use of it. 1. Because they had not been used to it, and did not want it, the earth bringing forth plenty enough for the small number of mankind in the first ages. 2. Because of the few creatures that were preserved in the Ark, two only of each kind of the Unclean, and seven of the Clean. Had they presently fallen to feed on either of them, the brood had been soon diminished, nor had there been sufficient for weekly sacrifices. And therefore the grant of animal food did not so much respect the first as future ages, when mankind would be increased and necessity would compel them to make use of the liberty given; and in truth in many hot climates there is but little animal food eaten to this day, in respect of what is used in colder climates, where it is more necessary.

The same I say as to the much larger stature of human bodies, verified by the bodies or bones dug up in after ages. These cannot be supposed the bodies of the *Antediluvians*, but of those who died after the Flood; and why are they found of so much larger

larger ſize than men can meaſure at preſent, but that they are the offspring of thoſe who came out of that firſt world, who were men of like or larger ſtature?

This Enquiry into the firſt food of mankind, the Reader, I hope, will perceive has not been in vain, ſince from thence we have been able to illuſtrate ſome points of importance. And from hence we have found that the whole food of mankind before the Flood conſiſted of vegetables, fruits, corn and the milk of animals. Nor was this a ſcanty proviſion, conſidering the great fertility of that primitive earth, ſince from theſe they might make a great variety of dainty diſhes, as we ſhall have occaſion to obſerve in another place.

SECT. III.

Of the State and Conſtitution of the firſt Earth and its fertility both before and after the Fall of man.

THOUGH in the preceding Section I have ſhewed that the food appointed man, of vegetables, fruits, corn and milk, was ample proviſion for his ſuſtenance, yet as I have made it apparent, that mankind was increaſed to an immenſe multitude before the Deluge, and alſo that the bodies of men that were to laſt 8 or 900 years, and their larger ſtature would require a much greater quantity of food for nouriſhment than is neceſſary at preſent, I muſt now endeavour to ſhew how the *Antediluvian* earth was able to maintain that prodigious number of men and animals, that by the courſe of nature and regular proceſſion of increaſe, there would be upon it.

That the earth in its *Virgin* ſtate, as it came out of the hands of its Maker, adorned and beautified with

with all that variety of flowers and herbage, plants and trees of different fruits or verdure, was exceeding fertile as well as beautiful to the eye, will not, I think, be in the least doubted, but how long it continued in this glorious state is the question, or whether it might not suffer some alteration and change upon man's transgression may seem to admit of no question. For though the earth itself was in no fault, as not being capable of any, yet man, to whom it was given for an habitation, was in a very great one; and therefore it may be well supposed, that that earth which was made for man innocent and obedient to the laws of his maker, would not continue such to man guilty of transgression and an offender. Since its good or bad state depended wholly on the pleasure of him that gave it a being; and in punishment of man's offence, its first fertility and beauty might be diminished; of which the earth itself would be wholly insensible, being inanimate and brute matter, but man would be very sensible to his great grief and sorrow. In this point however authors are not all agreed.

That a very great change indeed happened to the earth at the Deluge is agreed on all hands, but in a very different manner and to quite different purposes. Those who maintain the much greater fertility of the *Antediluvian* earth than of the present, do hold, that the curse upon the ground pronounced after the transgression of our first parents, did not take place in any great measure till the Deluge, by which it suffered a great change, and was made far less fertile than before. Others again, and those of great learning and eminent station are of a contrary opinion. They think that the curse pronounced after the Fall, took immediate hold of the earth and subsisted in its rigour till the Deluge, which was the completion of the curse, and that after the Deluge the earth was blessed to *Noah*, and restored to its first

fertility. These opinions are directly opposite, the first being that the Deluge was the *infliction* of the curse, the other that it was the *completion* of it, and as both of them endeavoured to support their assertions with reason, it will be the more needful as well as require the more accurate search to come at the truth of the matter, which is necessarily connected with our present subject. The Scriptures are the only writings that can give us any light into this matter, and 'tis upon such passages as we find there relating to it, that we must form our reasonings, which we shall now produce in their order.

1. In the first place then, after the dry land appeared and was furnished with grass, herbs, trees &c. it is said *Gen.* i. 12. that *God saw that it was good*, and again, *v.* 31. *And God saw every thing that he had made and behold it was very good*, that is, exceeding fruitful and beautiful, and answerable to the ends for which he had thus furnished the earth, *viz.* for the plentiful nourishment and support both of the animals and of man, who was blessed and commanded to be fruitful and multiply and replenish the earth; for the Almighty Creator deals not his bounty with a niggardly hand, but liberally and plentifully. And in this abundant plenty and richness of its productions the earth had continued, had man abode in his Innocence, but that upon man's transgression it would not probably remain as before. Accordingly in the sentence passed 2. It is said *Cursed is the ground for thy sake* * (not for its own) *in sorrow shalt thou eat of it all the days of thy life, thorns also and thistles shall it bring forth to thee, and thou shalt eat the herb of the field, in the sweat of thy face shalt thou eat bread till thou return unto the ground* †----*Therefore the Lord sent him forth from the garden of Eden, to till or cultivate the ground from whence he was taken* §. Now

* ἐν τῇ ἐργασίᾳ σου LXX.

† Gen. iii. 17, 18, 19. § Gen. iii. 23.

from

from this it would appear that the ground immediately felt the effect of the curse pronounced. But we may observe that as the penalty annexed to the law of the forbidden fruit was this, *in the day thou eatest thereof thou shalt surely die*, or rather *dying thou shalt die*, that is, become mortal, which I take to be the true meaning (for had the former been the true sense of the words, then death must have been immediately inflicted on our first parents) and therefore though by their transgression they forfeited their immortality and former happy condition, and that the sentence of death hung over their heads, and might be inflicted at any time, yet it pleased God to prolong their lives above 900 years, in order to make good that which God had *primarily* designed, that they should increase and multiply and fill the earth. So in like manner though the earth lay under the sentence of the curse instead of that benediction given it at first, yet the execution of that sentence might in a great measure be respited, or suspended till men's sins became ripe for judgment, when it would be inflicted fully; even as in several cases since, we find that judgments have been suspended several years after they have been peremptorily denounced. Besides as the sentence here passed upon man respected not himself only but all his posterity, so the curse pronounced on the earth for his sake, might respect not so much that present as future ages, when transgressions were multiplied. But yet that some change did happen to the earth, or that the first benediction given to it was in some measure withdrawn seems apparent from the consideration of the several parts of the sentence passed, 1. *In the sweat of thy face shalt thou eat bread.* Here the labour of tilling or cultivating the ground was laid upon man, to which he was not subjected before, though he lived not in idleness even in his Innocence, having the trees of the garden to prune and dress and

to keep the whole in order and beauty, which a luxuriant fecundity would require. 2. He was driven out of Paradiſe. He had no longer the delicious and fragrant fruits of Paradiſe for his food, but was to eat the herb of the field, or what grew on the common earth, where the repetition of thoſe words *thou ſhalt eat the herb of the field* upon this important occaſion ſhews clearly that no animal food was then granted to man, being it ſeems not yet neceſſary for his ſuſtenance. But 3. That which was further added to his food, beſides *the herb of the field*, was bread produced by the culture of the earth and man's labour, and 4. Notwithſtanding his culture of the earth, it ſhould bring forth other things than he wanted for his nouriſhment, *thorns alſo and thiſtles ſhall it bring forth to thee*, not that theſe were now firſt created, but as the earth brought forth every herb and plant that was made, in luxuriant plenty, ſo ſhould it alſo theſe, which he ſtood not in need of, but would increaſe his labour and toil in clearing the ground of them. Hence I ſay it ſeems apparent, that the firſt benediction of the earth was in ſome meaſure withdrawn, becauſe what the earth brought forth of itſelf and without culture which was firſt given to man for food, was not now ſufficient for that purpoſe, as wanting much of thoſe rich juices and ſubſtantial nouriſhment which it before afforded, and therefore bread was added which thenceforth became the chief *ſtaff* and ſupport *of life*.

3. After *Cain*'s murder of his brother *Abel* it is ſaid ----*And thou art curſed from the earth, which hath opened her mouth to receive thy brother's blood from thy hand, when thou tilleſt the ground, it ſhall not henceforth yield unto thee her ſtrength*----- In the firſt ſentence paſſed, *Adam* was not curſed, but the ground for his ſake; but here the curſe is firſt laid on *Cain* himſelf, and then on the ground, becauſe his ſin

was wilful and deliberate and a high offence both against God and his poor brother. Here the first benediction is further withdrawn (*the ground shall not yield unto thee her strength*) not indeed from the whole earth, but from that part of it only which *Cain* was to inhabit, by which the culture of the earth would become more toilsome and laborious to him and his posterity, than it was to the rest of the sons of *Adam*.

4. *And He* (Lamech) *called his name Noah, saying, this same shall comfort us concerning our work and toil of our hands, because of the ground which the Lord hath cursed.* This text is the hinge of the Controversy, but before we consider it as a prophecy, it may not be improper previously to shew that whatever the state of the earth at that time might be as to fertility, man's life was then become truly toilsome and laborious on several accounts; as

1. From the state and condition of the earth itself. For several ages after the Creation the number of mankind was but small and could occupy but a small part of the earth. In the mean time the earth would be overgrown with grass, plants, shrubs and trees, all which man would have to root up and clear the ground of, that he might cultivate it for the production of corn, now become necessary for his sustenance; and the more fertile and luxuriant the earth was, the greater would his labour and toil be. And thus our first planters in *America* found it, where their first and greatest labour was and is still to clear the ground of the woods &c. before it can be fit for culture.

2. If man's stature before the Flood was larger than it is now *viz.* of 10 or 12 foot, as we have given reasons to believe; and if the culture of the earth was also by the hand only as there is reason to think; the *plough* being an invention after the Flood, and not necessary before, for a reason that will be

given. The culture of the earth by the hand only, to men of great ſtature would make it very laborious, though they were not obliged to dig ſo deep as we do now.

3. Before the days of *Lamech* they had dug into the bowels of the earth for *braſs* and *iron* and perhaps other metals, *gold* and *ſilver*; but as the two firſt were of the greateſt uſe to mankind in facilitating the culture of the earth, they would uſe all diligence to procure them: Now the digging for *braſs* and *iron* would be as laborious then as it is now, only their greater ſtrength making ſome difference.

4. At the time of *Noah*'s birth mankind was greatly multiplied. According to the Chronology in the LXX which I take to be the true, *Noah* was born in the year of the world 1656. Now by our ſecond table it appears, that the number of men born into the world in the year 1620 was 53,687 millions and more. Before that year all that were born in the firſt ſeven hundred years would be dead, but all that were born after the year 800 might be alive; and though it be not neceſſary to deduct one half for that ſum mentioned for deaths, caſualties and deficiencies, yet for arguments ſake we ſhall allow that one half would be the ſum total that were alive; there will then be 26,843 millions and above; and becauſe in our former computation we have abated one half again, we ſhall do the ſame here, and ſuppoſe there were no more than 13,421 millions, ninety-ſeven thouſand and eight hundred of mankind upon upon the earth about the time of *Noah*'s birth. Now thirteen thouſand, four hundred and twenty-one millions is a prodigious number, and as the number of mankind increaſed, ſo would the greatneſs of their labour increaſe to procure bread for all of them, for men of ſuch large bodies and ſtomachs proportionable.

5. Before

5. Before the birth of *Noah* there were probably *Giants* in the earth, whose prodigious stature making them much more unfit for the culture of the earth, and yet at the same time their huge bodies requiring a much greater quantity of food for their nourishment, they would chiefly live by spoil and rapine, which would still make the lives of other men more laborious and slavish, and might be one means of driving men to the furthermost parts of the earth to avoid their depredations. Add to all this

6. That by the time of *Noah*'s birth, all the land animals would be increased to a prodigious number, which notwithstanding all the care and precaution that men could use, would devour a good deal of the fruits of their labours. From all which considerations it appears that man's life was at that time very laborious, how great soever the fertility of the earth might be.

We come now to consider the import of *Lamech*'s speech as it was *prophetical* by the name he gave his son and the reason annexed. *This same shall comfort us concerning our work and toil of our hands, because of the ground which the Lord hath cursed.* Now though the *Septuagint*, *Philo Judæus*, St. *Jerome* and our *Ainsworth* derive the name *Noe* from a verb, that signifies *rest* and not comfort, *this same shall make us rest from the work and toil of our hands*, yet there is no great matter in this, because in so far as he gave them rest, he brought them comfort, though it had been better to have kept to the true meaning of the word. The question then is, what *Lamech* might mean by that *rest* which his son *Noah* was to give mankind *from the work and toil of their hands, because of the ground which the Lord had cursed?* If we take St. *Jerome*'s reason for the name given, the question will soon be decided;

for according to him * it respects not the time to come but the time past, "for that because in his "days all former works should cease or rest for "ever by the Deluge he therefore had the name "*Noe* (which signifies rest) given him." In this sense indeed the words are both true and prophetical, foretelling both the destruction of mankind that was to come in his son's days, and the ceasing or rest from all former works and labours upon the face of the earth. But yet I do not take this to be the true import of *Lamech*'s words. For we may observe that *Enoch* who was a prophet, as we learn from St. *Jude*, named his son *Methuselah* or *Methusheleh*, which according to *Ainsworth* implies, *He dieth and the dart cometh*, that is, the dart of God's judgment on a wicked world. For *Methuselah* died in the year of the Flood, and as soon as he died, *i. e.* in that year, the world was destroyed by the Flood. Now *Lamech* the son of *Methuselah* could not be ignorant of the import of his father's name, and therefore to have called his son by the name of *Noah* for the reason given by St. *Jerome* was only *actum agere*, to foretell that which was foretold before by his grandfather *Enoch*; whereas it is more reasonable to think it would import something more or besides, not yet foretold. And therefore if we consider only the literal sense and meaning of the words, they imply a blessing that was to accrue to mankind by his son *Noah*, by which the labour and toil of men would be very much alleviated, as it happened by the grant of animal food to him after the Deluge, which very

* ——Et vocavit nomen ejus Noe, dicens, iste requiescere nos faciet ab operibus nostris. Noe requies interpretatur. Ab eo igitur, quod sub illo omnia retro opera, quieverunt per diluvium, appellatus est requies. The LXX seems to favour this opinion of St. *Jerom.* Οὗτος διαναπαύσει ἡμᾶς ἀπὸ τῶν ἔργων ἡμῶν καὶ ἀπὸ τῶν λυπῶν τῶν χειρῶν ἡμῶν, καὶ ἀπὸ τῆς γῆς. ——καὶ ἀπὸ τῆς γῆς, and from the Earth.

much

much lightened man's labour, since a great part of his food, *flesh* and *fish* comes to him with little labour, and without the toil of tilling the ground for it. Not that I think that either *Enoch* or *Lamech* knew that mankind was to be destroyed by a Flood of waters, no, nor even *Noah* himself till he received the command to build the Ark. Their prophecies were only general. But here lies the difference between the prophecy of *Enoch* and that of *Lamech*. *Enoch*'s was only a prophecy of destruction to mankind for their wickedness without any glimpse of hope implied in it; but *Lamech*'s implied indeed the same destruction to come, but contained besides the hope of a blessing to come by his son's piety, though he might not know what the particular blessing was, his prophecy being only, as I said, general.

But neither do I take this to be the full import of *Lamech*'s prophecy. The great prophecy and promise upon which the faith and hope, of mankind depended, was not yet fulfilled viz. *That the seed of the woman should bruise the serpent's head* who had deceived our first parents. *Eve* probably imagined she had got this seed when she had brought forth *Cain*, *I have gotten a man from the Lord*, or as the LXX has it, *I have gotten a man by the Lord*, meaning that man who was to give them the victory over their enemy, but how miserably was she deceived, when instead of that blessed seed she expected, her son proved to be the child of the Devil, and murthered his brother to her great sorrow and woe? But this first prophecy being not yet fulfilled, and the world's destruction foretold, *Lamech*'s prophecy implying a blessing to come to mankind by his son *Noah* did also virtually contain the hope of this first desirable promise, and that though mankind was to be destroyed for their wickedness as by *Enoch*'s prophecy, yet his son *Noah* was to continue the race and bring a blessing with him to it, out of whose loyns was to

come *the man by the Lord* who ſhould break the ſerpent's head, and give mankind the victory. Whatever was the literal meaning of *Lamech*'s prophecy this was certainly implied in it, and by clear conſequence deducible from it, ſo that the faith and hope of mankind relying on the firſt prophecy were ſtill kept alive. And thus was the firſt promiſe made to our firſt parents continued to mankind, and ſtill to be made good in due time, though the world's deſtruction had been foretold by *Enoch*. So that this our interpretation is ſo far from making a *gap* in the chain of prophecies, that it ſhews a moſt gracious renewal of the firſt grand prophecy and promiſe, at a time when it was exceedingly wanted to keep up the faith of *Lamech*, *Methuſelah* and other righteous perſons, (of whom there might be many ſtill living, it being yet 600 years to the Flood) as alſo of the patriarchs and other righteous men after it.

5. After *Noah* had offered his ſacrifice, *The Lord ſaid in his heart, I will not again curſe the ground any more for man's ſake, for the imagination of man's heart is evil from his youth* *, *neither will I again ſmite any more*

* Our laſt Tranſlators often put in the margin that reading which affords the moſt commodious ſenſe. *For the imagination of man's heart is evil from his youth.* The relative particle *for* ſhould render the reaſon of the determination, but it appears an odd reaſon that God ſhould determine not to curſe the ground again, becauſe the imagination of man's heart was evil from his youth. This would rather ſeem a reaſon why God ſhould not determine as he did, ſince the evil imaginations of mens hearts from their youth might in time increaſe to the ſame pitch of wickedneſs (as in truth they have done and to greater) and ſo merit the ſame deſtruction. But now if we read the words as in the margin. *I will not any more curſe the ground for man's ſake,* (διὰτὰ ἔργα τῶν ἀνθρώπων, LXX) *tho' the imagination of man's heart be evil from his youth,* they afford this ſenſe, That tho' God knew that the imagination of man's heart was and would be evil from his youth, yet he determined not to deſtroy the world again by a flood of waters, as it would not conſiſt with the divine oeconomy for the redemption of mankind; but that the world ſhould continue

more every living thing as I have : while the earth remaineth, seed time and harvest, cold and heat, summer and winter, and day and night shall not cease* †. But neither will this sentence I fear enable us to decide the question, since the first part of it may be interpreted to the advantage of either side, thus 1. If the Deluge was the *completion* of the curse, then these words naturally imply a blessing, and that the earth should not any more bear the like curse. But 2. If the Deluge was the *infliction* of the curse in its full rigour, which would inevitably make a great change in the surface of the earth, then, it should no more be cursed in that manner so as to destroy every living thing that was upon it, as had now been done; *notwithstanding* that God foresaw that the *imagination of man's heart would still be evil from his youth.* Neither will the latter part of the sentence necessarily imply that there had been no regular seasons in the *Antediluvian* earth, but this rather. 1. That there had been these different vicissitudes of seed-time and harvest, summer and winter before the Flood. 2. That during the continuance of the Flood they had ceased, and 3. that they should cease no more in like manner while the earth remained.

6. *And God blessed Noah and his sons, and said unto them, be fruitful and multiply, and replenish the earth, and the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air, and upon all that moveth upon the earth, and upon all the fishes of the sea, into your hands are they delivered, every moving thing that liveth shall be meat for you, even*

continue with the same vicissitude of seasons as before till the general conflagration, which was to be the last, as the Deluge was the first lustration of the world.

* *Neither will I again smite any more every living thing as I have done.* This I think is a clear proof, that every living thing upon the earth, both men and animals were destroyed by the Flood, except those preserved in the Ark.

† Genes. viii. 21, 22.

as the green herb have I given you all things; but flesh with the life thereof shall you not eat *. Now here. 1. God blessed *Noah* and his sons, as he had at first blessed *Adam*. 2. They were commanded to be fruitful and multiply and replenish the earth, the same as was enjoined to *Adam* and *Eve*. 3. The dominion over all the other creatures was given them, not in the same words, but in as full and express terms.

4. The grant of *animal* food was given, *every moving thing that liveth shall be meat for you*; and here first given, *even as the green herb have I given you all things:* This surely implies that the green herb (by which all things that spring out of the earth are understood) was all they had before, but now they were to eat of every living thing also, which is further confirmed by what was forbidden in it, *but flesh with the life thereof, which is the blood thereof shall you not eat*; for had mankind been allowed animal food before, we should certainly have heard of this condition here annexed, as well then as now, since whatever reason there was for this prohibition (which we stay not to enquire in this place) the same was as necessary before as now. But then here is no express mention made of the earth's greater or lesser fertility which might determine the point in question. The same blessings indeed are renewed to *Noah* and his sons as were first given to *Adam*, because as *Adam* was the parent of mankind in the first world, so were they of this second; but that is all, the rest we are left to collect from circumstances. Now from this circumstance of the addition of animal food, I collect that the earth would not be near so fertile and abundant in her productions as she was before the Flood. For why was this additional food now first granted but because it became necessary? It is not likely it would have been given without necessity, and whence did

* Gen. ix. 1, 2, 3, 4.

that

that necessity arise but from this? That the earth after the Flood would neither yield that luxuriant abundance which it did before, nor yet would its productions yield that nourishment and strength to man, which they did formerly *. Thus did the goodness of God by a natural gradation provide for the sustenance of man, as occasion or necessity required. 1. In the state of Innocence the food appointed him was that which the earth produced without his labour, which productions were so nourishing and strengthning in its virgin state that they were abundantly sufficient for his maintenance, especially the fruits of Paradise where he was placed. 2. After the Fall when God withdrew in part his blessing from the earth, so that the *spontaneous* productions thereof were become less nutritive than before, bread was added, to be produced by man's labour and culture of the earth. And 3. After the Flood, when the earth (from a natural reason to be given) would become still less fertile, and her productions also less nutritive than before it, *animal* food was then added, and now man had all given him that could *naturally* contribute to his support and maintenance. And in this last additional grant, the wisdom of God is apparent as well as his goodness. Would men make use of all those things which God has given them for food, they would not want so often as they have done, but when they neglect or despise one or other of them, they greatly suffer, as in *America*, where the natives are too lazy to till the ground for corn, and the most of what they have to live on are the beasts they take in hunting; or in many parts of the *East-Indies* where many will not

* The use of flesh after the Flood was granted rather to supply necessity, when the Flood had weakened the earth, than to minister a greater abundance than it had before, and least of all to satisfy the greedy and curious appetites of more than beastly men. *Purchas.*

eat

eat *animal* food, they are often expoſed to great wants through the inclemencies of ſeaſons. In *China* 'tis true they not only cultivate the earth with great induſtry but eat every thing that is eatable, and yet are often expoſed to famine, ſometimes for want of rain, but more frequently by inundations of the rivers; but the main reaſon of that is, that the country is overſtocked with inhabitants, there being at leaſt double the number of people, than the land is able to maintain; and was it not from the great plenty of *fiſh* in their rivers and ſeas, half the kingdom would ſtarve. And was this laſt proviſion of food duly taken care of, as the ſeas and rivers in almoſt all places yield abundance of it, men might be much better ſtocked with food in the winter than they commonly are.

Theſe are all the Paſſages in *Moſes* which have any relation to the ſubject in hand; but there is one paſſage in the New Teſtament which may caſt ſome further light on it. They are the words of *Jeſus* in *Luke* xvii. 26. "And as it was in the days of *Noe*, "ſo ſhall it be alſo in the days of the Son of Man; "they did eat, they drank, they married wives, "they were given in marriage, until the day that "*Noe* entered into the Ark, and the flood came "and deſtroyed them all: Likewiſe alſo as it was "in the days of *Lot*, they did eat, they drank, "they bought, they ſold, they planted, they "builded, but the ſame day that *Lot* went out "of *Sodom* it rained fire and brimſtone from Hea-"ven and deſtroyed them all."--- Now as the ſame things are in a manner predicated of both theſe remarkable times, we may ſuppoſe their circumſtances (as to the point we are now upon) to have been much alike. The facts here mentioned look more like the natural conſequences of great plenty and a fertile ſoil than of great infertility; and as they are both put into the compariſon, we know that one of them,

them, *viz.* the land of *Sodom* and *Gomorrha* with the adjacent plains, was exceeding fertile, and compared to the Garden of the Lord, to *Paradise*; we may therefore justly think the *Antediluvian* Earth to have been very fertile also.

From all which laid together, I think it may be fairly inferred, that the earth was much more fertile before the Flood, than it was, or could be in the nature of things after it. And why the earth after the Flood could not be so luxuriantly fertile as it was before, and also why it was not fit that it should be so, two reasons may be given, for both which we hold ourselves indebted to the learned and inquisitive Dr. *Woodward.*

1. There is a *natural* reason why the earth could not be so fertile after the Flood as it was before it. As the first earth brought forth all manner of plants of itself without any labour or culture of man, and even before there was *a man to till the ground*, we may reasonably suppose that the exterior *stratum* or surface of the earth consisted of such terrestrial matter as was fit for these productions, that is, of a rich light *mould* affording plentifully matter for *vegetation.* Now though God was pleased upon man's transgression to withdraw in part his benediction from the earth, as has been shewn, yet the earth itself was untouched till the Deluge, the same surface of rich mould was still upon it, and brought forth plentifully, especially when man's culture for corn was added. But the inundation of waters at the Deluge greatly altered the constitution of the earth itself; it mixed and confounded this upper *stratum* of *vegetative* earth with other terrestrial matter not fit for *vegetation*, with sand, gravel, stones and all kinds of mineral matter, which must needs render the earth in general much less fertile than it was before; and which made the *plough* necessary to dig up the proper *vegetative* mould and bring it to the surface, and also

manure

manure or compoſt to encreaſe and inrich it, neither of which before the Flood it needed. But

2. There is a *moral* reaſon why it was not fit that the earth ſhould be ſo abundantly fertile as it was before. The luxuriant productions of the firſt earth, after man's nature became corrupted and to deviate more and more from *righteouſneſs*, ſerved only to excite and foment his luſts, and to miniſter plentiful fewel to his vices and luxury, as we find it has done in many nations and in ſeveral ages ſince; to cut off therefore ſuch occaſion of ſin and wickedneſs, God in great mercy to men retrenched the earth of its former fertility, thereby obliging them to labour and diligence, and employing moſt of their time to procure their neceſſary ſubſiſtence, which the earth by diligent culture will ſtill afford, but not that luxuriant abundance it did before the Flood. If we take a ſurvey of the different regions and countries of the world, we ſhall find this to be the truth of the caſe. In many parts of the earth men have muh ado to live, in others induſtry and diligent culture procures ſufficiency and abundance, ſo as to be able to ſupply others that want, and ſome places are ſtill exceeding fertile; *Egypt* and *Sicily* for inſtance, of corn, and ſome places in *America*, along the River *Miſſiſſippi* yielding with little culture two crops in the year, probably on account of its being but then firſt broken up. Some places both in *Aſia* and *America* are as it were a *Paradiſe* in reſpect of the reſt, to ſhew us perhaps what was and would have been the ſtate of the earth had not man ſinned; but far the greateſt part is nothing to be compared to theſe, and evidently ſhews that effect which the ſins of men had upon the earth itſelf. In a word, if we take a ſurvey of the whole, it cannot be thought that the firſt bleſſing was reſtored to the earth after the Flood, or that it came at firſt out of the hand of its maker in the ſtate it is at preſent, ſince ſo

great

great a part of it bears still the marks of the curse laid upon it.

But here it is necessary to observe that all the barrenness and infertility of the present earth is not owing to the Deluge nor the effect of the first curse laid upon it, though it be owing to the same cause, the wickedness of its inhabitants. The earth has suffered great changes since the Deluge. Many great and flourishing cities and kingdoms have been destroyed, and the land itself laid waste and rendered infertile for the sins of those that lived therein, witness those fertile plains of *Sodom* and *Gomorrha* now turned into a standing lake, the dead sea; witness the land of *Palestine* itself, which from being one of the most plentiful spots of the earth when it enjoyed God's blessing, is now rendered barren and unfruitful. It is surprizing to think what vast multitudes it was able to maintain in great abundance of all things in the days of *David* and *Solomon*, and some of the kings after them; when the kings of *Judah* and *Israel* could bring 500,000 and 800,000 men into the field at a time, whereas now it could scarce maintain the hundredth part of the numbers it once had upon it. The like has befallen many other places besides, verifying that of the Psalmist *. *He turneth rivers into a wilderness, and the water-springs into dry ground; a fruitful land into barrenness for the wickedness of them that dwell therein*, and so *vice versa.* Upon the whole then we conclude that the *Antediluvian* earth was generally far more fertile than the present is, which we give as a second reason how it was able to maintain such a prodigious number of men and animals as were upon it.

* Psalm. cvii. 33, *& seq.*

SECT.

SECT. IV.

That the fertile ſurface of the Antediluvian *earth was of much larger extent, than what it is at preſent, or has been ſince the Deluge.*

NOtwithſtanding the much greater fertility of the *Antediluvian* earth than of the preſent, yet that alone will not anſwer all our demands upon it for thoſe many millions of millions of men we have placed there before the Deluge; we muſt therefore find ſome other cauſes (ſince this alone will not do) which together with the former may be proportioned to the effect, the maintenance of ſuch numbers both of men and animals; and this we take to be the much larger extent of land in the *Antediluvian* earth than in the preſent. To this purpoſe we may obſerve, that a very large part of the ſurface of the preſent earth can afford little or nothing for the ſuſtenance of man or beaſt, ſince there are 1. Innumerable barren rocks and chains of mountains in many parts of the earth. 2. There are vaſt wild and ſandy deſarts of many miles extent in ſeveral parts of the world, which not only afford no ſuſtenance, but where paſſengers often hazard their lives in going over them *. 3. There are very large lakes and marſhes of great extent, which occupy millions of acres. That it is thus in the preſent earth is notorious, but that it was ſo from the beginning may be juſtly queſtioned, and we need not in the leaſt heſitate to affirm, that it came not in this condition at firſt out of the hands of its maker. There are for the moſt part the effects of

* In thoſe vaſt wilderneſſes (the deſarts of *Lybia*) there is neither to be found bird nor wild beaſt, nor herbs, no nor ſo much as a little fly; and nothing is to be ſeen, but mountains of ſand and the carcaſſes and bones of camels. *Poncet's* journey from *Grand Cairo* to *Ethiopia*. An. 1698.

the Deluge, which left upon the earth indelible marks of God's displeasure against sin in all the several parts of the world, and are a lasting *memento* to all future ages what sinners have to fear from the judgments of a righteous God. For

1. It is reasonable to believe that the hills and mountains were at the first Creation covered with a surface of verdure and vegetables, which afforded sustenance for men and animals; which surface was impaired or washed off by the Deluge and has now left so many of them bare and barren. 2. Though several lands have been overflowed by particular inundations since the Deluge, yet those very large lakes which are in some parts of the world are very probably the remains of the waters of the Deluge. The Missionaries in *Canada* found a vast lake of 400 leagues, and yet did not reach to the end of it. In *Africa* in the land of the *Caffres*, there is a lake called *Heniozura*, on which they had sailed several weeks, and yet not come to its utmost bounds, which lake is not marked in the maps *. 3. Those vast desarts of sand in *Africa* and other parts of the earth, we impute with great probability to the same cause, *viz.* that they are the effects of the Deluge, which as it left large tracts of land covered with waters, so other large tracts covered with sand †, which were not so at first, it being reasonable to think that the earth at its first Creation was fertile more or less in all the parts of it. We see here then that many millions of millions of acres are now rendered unfruitful by the Deluge, which in the *Antediluvian* world were fertile and afforded sustenance for men and animals. But

* *Fourni r*'s Hydrography, p. 800, 801.

† In the city of *Dongola*, the streets are half deserted and filled with heaps of sand occasioned by floods from the mountains. *Poncet*'s Journey. This shews how the floods of waters at the Deluge might leave vast tracts of land covered with sand.

we are not yet come to the full extent of the *Antediluvian* earth.

That there were ſeas from the beginning is evident, 1. From the expreſs teſtimony of Scripture. 2. From the reaſon of the thing, or their great uſe and benefit in the natural world, and 3. is demonſtrable from the vaſt number of ſea ſhells and other marine bodies, which the overflowing of the waters at the Deluge left upon the ſurface, and in the bowels of the earth in all parts of the world. But yet that the ſeas were of that vaſt extent in the *Antediluvian* world, as they are in the preſent, may I think, very well bear a queſtion. An inſpection of the Globe or general map of the world will ſhew that the ſeas and oceans of the preſent earth take up two thirds of the ſuperficies of the Terreſtrial Globe; as for the *Terra Auſtralis incognita* it is no more to be ſeen in our modern maps. This is a great diſproportion between the dry land and the waters, and not likely, I think, to have been ſo from the beginning.

Dr. *Keile* I know in his learned and accurate Examination of Dr. *Burnet*'s *Theory of the Earth* &c. has endeavoured to prove by calculation that the preſent extent of the ſurface of the waters is neceſſary to raiſe ſuch a ſufficient quantity of vapours, as may ſupply the earth with rain, and with ſprings, fountains and rivers. In anſwer to this I ſay 1. That it is not certain that vapours are the ſole origin of all ſprings, fountains and rivers, though they be of ſome, but that there is reaſon to believe, that the waters of the great Abyſs are the origin of many or moſt of them, as is the opinion of many learned men confirmed by ſeveral obſervations, ſome of which we ſhall have occaſion to mention in the ſequel. But

2. Suppoſing vapours were the ſole origin of all ſprings, fountains and rivers, it may juſtly be queſtioned whether ſuch a quantity of vapours was ne-

ceſſary

ceſſary to the fertility of the primitive earth, as is for the productions of the preſent? The earth has ſuffered great changes in her exterior ſurface by the Deluge, as appears from the *natural* reaſon given in the preceding Section, and for that very reaſon may require a much greater quantity of vapours and rain for vegetation, than the former earth did, whoſe ſurface was of a richer and kindlier mould. And therefore, if the preſent extent of the ſurface of the waters be neceſſary to raiſe a ſufficient quantity of vapours for the earth's ſupply as it is now conſtituted, this is an illuſtrious proof of the Divine Wiſdom and Goodneſs, thus to contrive and accommodate the ſtate of things to man's preſent neceſſity; but yet it will not prove that the ſurface of the waters was as large in the *Antediluvian* world, where there was not the ſame neceſſity. It will rather, I think, prove the contrary, ſince according to that trite maxim *Deus & Natura nihil facuint fruſtra.*

Dr. *Woodward* indeed is of opinion, that the ſeas in the *Antediluvian* world took up the ſame, or near the ſame ſpace they do at preſent. His reaſon is, " that the *ſpoils* of the ſea, the ſhells and other ma- " rine bodies are left in ſuch prodigious numbers " and in heaps upon heaps in the earth beſides thoſe " which have long ſince periſhed, that they could " not have been left in ſuch quantities, had not the " ſeas occupied much the ſame ſpace as they do " now." But this conſequence does not neceſſarily follow, becauſe ſuch quantities there might have been, though the ſeas had not been of half the extent they are at preſent. For 1. Animal food neither fiſh nor fleſh was the food of mankind before the Deluge; but 2. ſuppoſe it had, yet for the firſt 500 years the number of mankind was but ſmall, and likely at a great diſtance from the ſea, what a prodigious increaſe then of all kinds of fiſh muſt there have been in the ſpace of 500 years conſidering

their large ſpawn? * and how immenſely greater during the time the old world laſted. We need not be ſurprized then at the immenſe quantities of the *Exuviæ* of marine bodies left in and upon the earth by the Deluge. But the reaſon he brings to prove that the ſeveral continents of the world were encompaſſed with ſeas as they are now, *viz.* that as there are different ſorts of fiſhes in the different ſeas of the world, ſo the *Exuviæ* of the ſame kind are *generally* found upon the contiguous lands does not always hold, ſince there are ſome ſhells found in the continent, which are ſtrangers in the parts of the ſea conterminous to thoſe continents.

2. That the ſeas in the preſent earth are vaſtly more extended, and conſequently the dry land ſo much leſs in proportion, may likewiſe be inferred from the great multitude of iſlands that lie near the ſhores of the greater continents, if it be true, what ſome alledge, that they are parts broken off by the Deluge from the main land, which before that reached to, and beyond them †. And though iſlands are thought to be rarely found in the great Ocean, yet there have been of late diſcovered in the midſt of the Indian ocean vaſt cluſters of *Iſlands*, all lying South-Eaſt of the *Philippines*; one cluſter of which is called by the *Spaniards* the *Marian* Iſlands, another the *Caroline* Iſlands, and a third the Iſlands

* Mr. *Leuwenhoek* aſſures us, that in 15 cubical inches of ſpawn which a Codfiſh may emit in a year, there are ten times more living animals than men upon the face of the earth. That he has likewiſe ſeen a prodigious number of thoſe inſenſible creatures in the ſpawn of Pikes, Trouts, Carps and Tenches, as well as in the ſperm of Ducks and Cocks.

† Neque ideo mirabimur adjacere plerumque littoribus majorum Continentium multas inſulas, ſive Inſularum agmina, ut Maldivas Indiæ, Novo Orbi Americanas, Heſperides Africæ, Cyclades in Ægeo mari, atque ita de aliis, et fere ſemper circa litora magnæ alicujus Continentis, aut finibus & fretis reperiuntur inſulæ, perraro in Magno Oceano. *Theoria Telluris.*

of

of *Paleu* or *Palaos*, all of them full of inhabitants. Now all these islands may have been part of a large continent before the Flood.

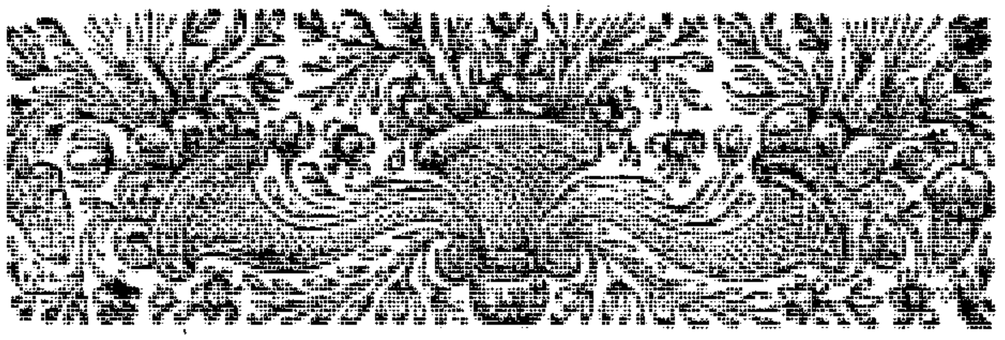
And for this reason also (besides that before given) that so great a part of the earth lay covered with the waters of the Deluge, and therefore could not maintain the number of inhabitants it did before, God was pleased to give *Noah* and his posterity the grant of animal food both fish and flesh, (*every moving thing that liveth shall be meat for you*) by which that deficiency was made up again to mankind, especially by that infinite number and great variety of fishes that are in the seas, lakes and rivers, whereby millions are nourished, as in *China*, and millions more might in other parts, were they as diligent to catch them, and ready to use them. So that those waters which remain as a standing monument of the Divine *Vengeance* on sinners, are also a lasting monument of the Divine *Mercy* to mankind.

We might here alledge in confirmation of what we have said in this particular, that ancient tradition mentioned by *Plato* of a large Continent bigger than *Africa* and *Asia* lying under water, and which they called *Atlantis*; but Dr. *Woodward* has precluded us from this Allegation, since among the other particulars relating to *America* before-mentioned, one is, what country the Antients intended under the name of *Atlantis* *. It appears hence that he believed this country the Antients called *Atlantis* to be that now called *America*, and very probably it might; for having lost all memory of the first commigration of mankind into that Continent after the Flood, and having for several ages had no communication with

* As to this *Atlantis* of *Plato*, *Acosta* alledgeth divers Platonicians, who interpret *Plato* after a mystical manner, and proveth by the words of *Plato* himself, that they can be no true History. *Purchas* —— But little regard is to be had to the mystical interpretations of the later Platonists.

them, they imagined *that* part of the world to be ſtill lying under the waters of the Deluge. But allowing Dr. *Woodward*'s conjecture to be very probable (for we can call it no otherwiſe now, ſince that larger work of his never appeared) I have given ſome reaſons to believe, that a great part of the *Terra firma* of the old world lies buried under the waters of the Deluge. This conſideration added to thoſe preceding, may ſerve to ſhew how the *Antediluvian* earth was capable to maintain ſo great a number of men and animals as were upon it before the Flood, the *dry land* being then ſo much more vaſtly extended than it is at preſent.

The End of the Firſt Book.



AN

ENQUIRY

INTO THE

TRUTH *and* CERTAINTY

OF THE

MOSAIC DELUGE.

BOOK II.

INTRODUCTION.

IT is not from any fondneſs of novelty or affectation of ſingularity (two very bad companions in the ſearch of truth, and which ſeem to have led our modern Theoriſt out of the way) that I have departed from ſome generally received opinions, or oppoſed the ſentiments of men in great repute and juſt eſteem for learning, in the firſt Book, and am likely to do the ſame in this. But having taken the ſubject from its firſt ſource, *viz.* the Divine *Monition* given to *Noah*, That led me on to conſider ſeveral particulars that had not been much adverted to before. And the diſcovery of truth in

the firſt inſtance opened the way to it in the following, and equally to point out the miſtakes others had fallen into.

That men of much greater learning, and a more extenſive knowledge have not hit upon the ſame things before, I take the reaſon to be, that they had only ſome particular parts or portions of the ſubject under conſideration; and ſo could not ſee how one part would tally with another, or all the parts bear a juſt proportion to each other and to the whole; whereas by extending the view to the whole in all its ſeveral parts, this inconvenience has been avoided: And as one thing depends on another as links in a chain, ſo they all contribute to eſtabliſh and illuſtrate the grand Point in view, viz. *the demonſtrating the truth of the fact*, which is the deſign of this Enquiry.

The reader will perceive that I have not tied my ſelf down to any man's opinion in all things, but how much ſoever I honour their perſons, or admire their works, or have been edified by their labours, I adhere to them no farther than as I am able to perceive truth on their ſide, or the greateſt probability of it; and ſo it happens, that I have been obliged to oppoſe the opinions of the very ſame perſons in ſome things, whoſe ſentiments I have eſpouſed in others. But if ſome things ſhall appear new, as ſome ſuch there are, I have endevoured to ſupport them with the moſt probable reaſons.

Having in the firſt Book refuted the ſeveral Schemes of a partial Deluge, and given ſome account of the ſtate of the *Antediluvian* world with an anſwer to ſuch objections as may be made againſt what I have repreſented it to be, I come now in this ſecond, to give ſome account of the Deluge itſelf, and of the ſeveral particulars that have any relation to it, beginning with the common opinion of *Noah*'s being 120 years in building the Ark.

CHAP.

CHAP. I.

Sect. I. *Whether* Noah *was* 120 *years in building the Ark?*

ALL truth is of more or less importance, and the discovery of the minutest truth is of some utility. It may serve to correct some errors, may strike light into some subject, or may give greater evidence of that whole, whereof itself may be but a small part. It may be of some use therefore to enquire into the number of years which *Noah* had to prepare the Ark for his preservation from the approaching Deluge.

The received opinion is, that *Noah* was 120 years employed in preparing the Ark, and the time appearing very long and disproportioned to the nature and quality of the work, is made an objection to the truth of the *Mosaic* account of the Deluge. But if we narrowly inspect the history itself, and *critically* examine the several declarations made of the world's destruction, we shall have reason to think that this opinion of 120 years has been inadvertently taken up, and that there is no just ground for it. Certain it is, that *Moses* does not say in so many words that *Noah* was 120 years in building the Ark, nor can it be reasonably inferred from the several parts of the Relation compared together. It is said indeed that God designing to destroy mankind for their wickedness, did yet resolve to give them a respite of 120 years for reasons to be given; but it will not thence follow, that therefore *Noah* was all that time in building the Ark. These have no necessary connection. *Noah* could not begin to build the Ark till he received a command to build it, and the reason

ſon of that command likewiſe imparted to him, which was not till long after.

To ſet this matter in its true light, let it be obſerved that *Moſes* in the 5th chapter of *Geneſis* (as in many other places) recapitulates ſome things he had ſaid before, and deſigning to give the number of years the firſt world laſted, he does it by ſetting down the age of the ſeveral *Patriarchs* at the birth of their ſons in the Genealogies from *Adam* by his ſon *Seth* to the ſons of *Noah*, who were born before the Flood came, and ſo concludes the Genealogies. Not that *Noah*'s three ſons were prior in time to the matters related in the 6th chapter; but that he makes an end of the Genitures of the Patriarchs at once before he enters on another and quite different ſubject.

After ſetting down the years of the Genitures, being in the 6th chapter to enter on a new and moſt important matter, viz. the great corruption of mankind, whoſe ſins called for vengeance from Heaven, and the original cauſe of that general corruption; he takes notice of ſome things he had omitted before, reſerving them to this as their proper place. *And it came to paſs that when men* (i. e. the race of *Cain*) *began to multiply on the face of the earth, and daughters were born unto them, that the ſons of God* (i. e. the race of *Seth* and other pious deſcendants of *Adam*'s children) *ſaw the daughters of men that they were fair, and they took them wives of all which they choſe.* The meaning is, they had a regard only to beauty and not to piety in the choice of their wives, as moſt men now have regard only to wealth. Now this fact had ſurely come to paſs long before *Noah*'s 500th year (for it was when the race of *Cain* began to multiply on the earth, which they had done ſome hundred years before *Noah*'s ſons were born) that by thoſe intermarriages and mixtures of the ſeveral races, the pious line of *Seth* and other ſons of *Adam* became

became corrupted themselves; by which means immorality spread over all, which before was chiefly in the race of *Cain.* 2. It must surely have been some hundred years before the birth of *Noah*'s sons, that there were Giants in the earth, and that the mighty men born of that profane mixture had *become men of renown of old.* Nay 3. It may be collected from some circumstances that those intermarriages, and the corruption occasioned thereby, had fallen out pretty early, even in the days of *Enoch*, who being a righteous man and a prophet, foresaw the destruction that was to come on the world on account of their increasing wickedness; as appears by the name he gave his son, which we have taken notice of before. It is evident then that *Moses* in this 6th chapter relates some facts which he had omitted at the time when they first fell out, viz. the cause of the more general depravation of mankind, the rise of *Giants*, and of those mighty men of old, who sprung from the mixture of the several races that had before kept distinct.

2. He next proceeds to acquaint us with what God had determined with respect to men on account of their wickedness. *And the Lord said my spirit shall not always strive with man, for that he also is flesh, yet his days shall be* 120 *years* *. The LXX have it, *My spirit shall not always abide with man.* Hitherto it seems the spirit of God continued with men †, that is, with the righteous seed while they continued such, but they being no longer guided by the *Spirit*, but become also *flesh*, that is, earthly, sensual and wicked, the spirit of God was withdrawn from them. Nevertheless they were not immediately to be cut off, but suffered to continue upon the earth

* Gen. vi. 3.

† Amator es animarum, quia spiritus tuus bonus habitat in omnibus. The sense of the *Syriac* translation of Wisdom. ch. xii. 1. See the learned Mr. *Arnold*'s Commentary on that Book. p. 73.

for

for 120 years longer *. There might be several reasons for prolonging their judgment, or respiting the execution of their sentence till that period. As 1. *Lamech*, *Methuselah* and other righteons persons were to be *gathered to their fathers in peace*. 2. Those three persons who were to renew mankind were not yet born, though it was necessary that they should not only be born, but grown up and provided of wives before the Deluge came †.

3. God

* Porro ne videretur in eo esse crudelis quod peccantibus locum paenitentiae non dedisset, adjecit sed erunt dies eorum centum & viginti anni; hoc est, habebunt centum & viginti annos ad agendum paenitentiam. *Hieron.*

† The reasons of things are not always assigned in Scripture, and sometimes one reason is given when others of greater importance are passed over in silence. Thus in the command for keeping three solemn feasts unto the Lord yearly, viz. the *Passover*, the feast of *Pentecost* and that of *Tabernacles*, a reason is given for the first, but not for the other two; not in *Exodus* xxiii, nor in *Numbers* xxix, nor yet in *Deut.* xvi, where all are mentioned. Only in *Levit.* xxiii. 40-43. the people are enjoined at the feast of Tabernacles to take boughs of goodly trees, Palms, Willows &c. and to make them booths to dwell in seven days, to the end *that your generations may know that I made the children of Israel dwell in booths when I brought them out of the Land of Egypt*, of which this annual practice was to be a memorial; but yet this does not seem to be the only or the chief reason of the appointment of this Festival. The main design of that would seem to be that after God had pardoned their heinous transgression of the Golden Calf at the intercession of *Moses*, he was pleased to set up his own Tabernacle among them, to fill it with the cloud of Glory (the symbol of his more immediate presence) from thence to give forth his oracles, and thus to dwell in a *Tabernacle* among them in a very extraordinary manner, a favour which no nation on the earth besides enjoyed.

Thus also in the command given to *Abraham* to offer up his only son *Isaac*, the only reason given is, that it was to tempt or try *Abraham*, and indeed a severe tryal it was; since though *Abraham* did know the design or import of the command, yet he did not know but that his son was to receive the sacrificing stroke: but the design of that command was a thing of much higher import, as now appears by the new light in which the very ingenious and learned Mr. *Warburton* has placed that transaction.

And

3. God is slow in his judgments, long suffering and patient, *not willing that any should perish, but that all should come to repentance.* And therefore St. *Peter* saith *the long suffering of God waited in the days of* Noah *while the Ark was a preparing.* Hence it is thought that the Ark was 120 years in preparing. It was preparing indeed within the 120 years, but not during all that time.

4. Sometime after this (how long is uncertain) the wickedness of men still increasing, and *violence* and *bloodshed* prevailing in the world, the final resolution is taken to cut off the whole race of men from the earth, and every living creature with them. *And God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually, and it repented the Lord that he had made man upon the earth, and it grieved him at his heart; and the Lord said, I will destroy man whom I have made from the face of the earth, both man and beast and creeping thing, and the fowls of the air, for it repenteth me that I have made them* *. This is spoken of God not properly, but after the manner of men, when they have no complacency in the work of their hands.

In the two preceding passages we see how the scene opens, and the world's destruction is revealed by degrees. In the first of them the time of man's farther abode in this world was limited to 120 years. In the second it was determined that not only men

And thus in the passage now before us, *Yet his days shall be* 120 years, though the only reason assigned by St. *Peter*, and admitted by others, is that of God's *long-suffering*, yet I have given two substantial reasons besides, which clearly shew that the Flood could not be brought on sooner. The meaning of that passage in St. *Peter* is, that God patiently bore with the wickedness of men, notwithstanding his determined resolution to cut them off, till the Ark was ready for *Noah*'s reception, which for weighty reasons was delayed for 120 years.

* Genesis vi. 5, 6, 7.

but

but every living creature for their ſakes, ſhould be cut off from the earth; but no revelation is yet made of the means by which the world was to be deſtroyed. Only as *in wrath God remembers mercy*, there is a glimmering of hope given, that mankind was not ſo totally to be deſtroyed, but that one was to be ſaved, as a reviving root, or ſeed of the new world; for it is added, *but Noah found grace in the eyes of the Lord* *. And upon this *Moſes* returns to *Noah* again, whom he had but juſt mentioned in the cloſe of the preceding chapter, and gives the reaſon, why he found grace and favour with God more than other men: *Noah*, ſays he, *was a juſt man, perfect and upright in his generation*, and *Noah walked with God*, the ſame character that was before given of *Enoch*, who was tranſlated that he ſhould not ſee death.

5. After theſe declarations made of the cauſe of that Univerſal Corruption which had overſpread the world, and the reſolution taken to deſtroy mankind and every living creature alſo with them, as a neceſſary introduction to that ſtupendous and never to be forgotten overthrow that was to come upon the world for ſin; laſt of all and not before, a revelation is made to *Noah* of the *means* by which the world was to be deſtroyed, namely by a flood of waters that ſhould overflow the whole earth †, when he received at the ſame time a command to build an Ark for his own preſervation, and likewiſe to take in two of every kind of living creatures, male and female in order to repleniſh the earth again, and to lay up food for himſelf and for them.

Now from this view of the method uſed in theſe two chapters in relating the ſeveral tranſactions contained in them, and by remarking the ſeveral diſtinct times or periods of the three ſeveral declarations made of the future deſtruction of the world, it is clear and evident,

* Gen. vi. 8. † Gen. vi. 13. to the end.

1. That

1. That *Noah* could not begin to build the Ark, till he had a command for it, and till the dimensions of it were given him, which was not till the third and last declaration made, that the earth was to be destroyed by a Deluge of waters, a point that had not been revealed before. 2. As the Flood began in *Noah*'s 600th year, if we count 120 years backwards from the Flood, that account will bring us to the year of *Noah* 480. But that could not possibly be the year in which *Noah* began to build the Ark. For when the command was given him for that work, his three sons were grown up, but in his 480th year not one of them was born; no not the eldest for 20 years after. It is very evident therefore that the Ark could not be 120 years in building, no nor half that time; and 'tis strange how that opinion could prevail so long in the world, when by comparing the several parts of the history together, it may be so easily confuted; but we may observe that an opinion once taken up, though inadvertently, passes for ages from hand to hand without further examination.

What number of years were given to prepare the Ark cannot be precisely determined, though it may be nearly conjectured. Was it certain that *Noah*'s sons were all married, before the command given to build the Ark, the time alloted for it must have been very short. And this it would seem was the case from that expression, *Thou and thy sons, and thy wife and thy sons wives with thee.* But yet this will not necessarily infer that they were actually married at the time, as none of them were yet come to the age of marriage in the *Antediluvian* world. I rather take that expression to be an intimation to *Noah* to provide wives for his sons before the Deluge came, who accordingly betrothed three young virgins to them in convenient time after, but that the marriages were not consummated till after the Deluge

was

was over. For two years after their coming out of the Ark was as ſoon as we can well ſuppoſe *Shem*'s eldeſt ſon to have been born, when *Shem* himſelf was 90 years old, as we have proved before, which was more than the ſixth part of the term of his life, very rarely the age of puberty in that world as has been already noted. But moreover a virgin betrothed is from that time accounted as a wife, though they be not yet come together, and how long or for how many years the eſpouſals might precede marriage in the long lives of the *Antediluvians* we cannot tell. Highly probable it is, that the command to build the Ark was not given till *Noah*'s ſons were come to ſome age, and able to aſſiſt in the work, ſo that the Ark could not be above 20 years a preparing, if indeed ſo much, perhaps not above ten. If it was 20 years in building, then *Noah*'s ſons were the eldeſt 80, the ſecond 74 and the youngeſt 67, when they began the work: but if it was finiſhed in 10 years, *Japhet* was 90, *Ham* 84 and *Shem* 77, when *Noah* began to build it.

But now it may be thought that by rectifying an *Error* we have run ourſelves into an *Inconvenience.* That by thus ſhortning the number of years, we have not allowed *Noah* time ſufficient for the work, ſince ſome thouſand trees were to be felled, barked, ſawed, dried and prepared for the building, ere ſo much as a nail could be driven into it, which would take up ſome years, and how could four men be ſufficient for this in 20 years much leſs in ten? In order to take off this objection, let it be conſidered 1. That cloſe application and diligence eſpecially when neceſſity requires it, will rid a great deal of work in a ſhort time. 2. That beſides the four men there were four women to aſſiſt, who might be uſeful in a great many things belonging to the work, and gathering the ſtores to be laid up in it. For more than 1500 years after the Flood we find that

the women however nobly born, were not brought up to an idle and indolent life, and we may well suppose that the *Antediluvian* women were inured to like labour. And to such a work as this, none would refuse to put their helping hand who were to be saved by it. 3. The wood whereof the Ark was made, might not be of the hardest kind, that would require much labour in preparing, but of the softer sorts, that may be got ready with much less. The word in the original is *Gopher* wood, which what that was, is not now known, except we will take the interpretation of the LXX *, which excludes the *Cypress* tree, and makes the Ark to have been built of the *Cedar*, *Pine*, *Fir* trees and others of the like sort. 4. There is a method of cutting down trees, which makes them soon fit for use, viz. by hewing them round near the roots, yet so as that the trees may still stand; thus the sap runs out in a little time at the incision, and the trees are soon fit for service, as in this case they might presently be, for the Ark being pitched within and without, it might be sufficiently secured from the entrance of water for 6 months and 17 days, for it was no longer from the beginning of the Deluge to the Ark's resting on the mountains of *Taurus* which overlook the plains of *Ararat*.

Now this enquiry into the time given *Noah* to prepare the Ark, which as near as can be guessed was between ten and twenty years, serves to correct

* *Make thee an Ark of Gopher wood,* ποιησον σεαυτῷ κιβωτὸν ἐκ ξύλων τετραγώνων, LXX. which *Vossius* contends should not be translated *ligna quadrata*, but *arbores quadrangulos*, that is, trees whose branches shoot quadrangularly, or by four and four at equal distances from the earth, and so making four angles in form of a cross, such as the *Pine*, the *Fir* tree, the *Cedar* and some others, but not the *Cypress*. Also that in the *Vulgate*, *fac tibi arcam ex lignis lævigatis*, should have been rendered, *fac tibi Arcam ex arboribus resinæ vel resiniferis*, another description of the same kind of trees.

ſome hitherto received opinions. One of which I ſhall mention here, the other will be the ſubject of the following ſection. Upon the ſuppoſition that what is contained in the *ſixth* chapter, follows in order of time the contents of the *fifth*, that is, the year of *Noah* 500, and the Flood coming in his 600th year, it has been concluded that there were 20 years cut off from the 120 firſt allotted to that generation for their continuance and repentance; which it is ſuppoſed was done on account of their increaſing wickedneſs inſtead of amendment. But there is no ground for ſuch imagination. The 120 years firſt alotted them coincide with the year of *Noah* 480, from whence to the Flood, which came in his 600th year, are juſt 120, the time given them at firſt. As God's *mercies are over all his works*, though he may reſpite the ſentence of judgment for ſome time, as in the caſe of *Ahab* upon his humiliation, yet he will not haſten it before its determined time.

SECT. II.

Whether Noah *gave any previous warning of the Deluge to the world?*

IT has been another prevailing opinion that *Noah* publiſhed to the world the judgment that was to come upon them by a Deluge of waters, if they did not repent; ſo that all mankind were ſufficiently apprized of their deſtruction before it came. This is the opinion of the *Jews*, who tell us, that *Noah* took *Lamech* and *Methuſelah* with him, and went into every country to denounce the impending judgment; nay *Joſephus* I think adds, that he left monuments of the Deluge in every place by erecting pillars on which it was engraven. But *Lamech* and *Methuſelah* were rather too old for ſuch long journeys,

neys, after the revelation of the Deluge was made; and the denunciation of it had been too dangerous in an age of violence for *Noah* himself, who might have been requited for his unwelcome news, with a violent death, as many of the Prophets were afterwards in their generations. In this opinion however they are followed by Christian writers, who seem to have been confirmed in it by St. *Peter*'s calling *Noah* a preacher of righteousness; this no doubt he was both by his words and works, but yet it will not necessarily follow from thence, that he published to the world their destruction by a Deluge of waters. I am far from denying that the judgments of God in general against men's wickedness might have been published many times, and even some hundred years before the Deluge came by *Enoch*, *Methuselah*, *Lamech* and *Noah* himself, who all seem to have been prophets. That *Enoch* was such we learn from St. *Jude*, as also that he prophesied of the destruction of the wicked: and that he foresaw the destruction that was to come on that very world appears by the name he gave his son, viz. *Methuselah*, i. e. *He dieth* and *the emission* or *dart cometh*, that is the dart of God's vengeance against the wicked, as interpreted by *Ainsworth*; accordingly *Methuselah* lived to the year of the Flood, and when he died the Flood came. *Lamech* also seems to have been endued with a prophetick spirit and foreknowledge of the world's destruction, by giving his son the name of *Noe*, *this same shall make us rest from the labour of our hands*, foreseeing that blessing which his son's piety would procure to mankind by the grant of *animal* food, that would greatly alleviate the labours of men in the tillage of the ground.

Thus the destruction of the world might have been prophesied of in general by these holy men and others in different parts of the world, though

they might not know the particular way in which it was to be effected; even as it was done to *Nineveh* by the prophet *Jonas*, *yet* 40 *days and Nineveh shall be destroyed*, without acquainting them by what means it was to be accomplished, which the prophet himself did not know, though it be probable, he might think it would be consumed by fire from Heaven, as *Sodom* and the cities of the plain had been long before. But against *Noah*'s proclaiming to the world the Deluge that was to destroy them, after the revelation of it made to himself, I have these reasons to offer

1. We read of no Commission given to *Noah* to publish the Deluge to the world, and 'tis not to be thought that he would undertake such a task without it. When the prophets in after ages declared the judgments to come upon the people, they were expressly commanded so to do. 2. There was no time for it. From the revelation of the Deluge made to himself, which was not till he had a command to build the Ark, the time remaining was no more than requisite to finish the work, and therefore he would set about it immediately. 3. It could not be done, because of the imminent danger which would have attended it. *Noah* was not to sacrifice his life by denouncing the judgment of God to come upon a wicked world, but to preserve it that he might become the father of the new world. Had he therefore attempted such publication in that earth which was filled with violence, he could not have escaped with his life. But suppose they had not proceeded to that degree of violence, how would he afterwards have been suffered to build the Ark for his own safety? Though some perhaps might only have mocked at the dotage of the man to be afraid of a deluge to drown the world, of which there was not the least appearance; others more wicked would have interrupted his work, and pulled down

down or burnt it as fast as he built it up, telling him, he should even take the same fate with the rest of the world, to whom he had denounced destruction. *Josephus* says that *Noah* being wearied with the wickedness of men, who had no regard to his admonitions, he departed from them, and retired with his family into a remote place. If this was the case, as probably it might, *Noah* might build the Ark, and the world know nothing of the matter, as it was not fit they should, lest they should have obstructed the work. 4. It had been to no purpose. Their doom was irreversibly decreed, and all hopes of their amendment past, they were become hardened and incorrigible. 5. That they knew nothing of the Deluge seems evident from the words of *Jesus*——*and they knew not till the Flood came, and took them all away* *. 'Tis true ȣκ ἔγνωσαν, may signify they minded it not, or paid no regard to it, but we may observe that the ignorance of the time of their destruction is here compared to *the days of the Son of man*, or the time of his coming to judge the world, of which he says, *But of that day and hour knoweth no man, no not the Angels of Heaven, but my Father only.* As men therefore shall know nothing of the time when that dreadful day shall come, so neither did the old world know any thing of their destruction. Again in *Luke* xvii. 38. the days of the Son of Man are compared not only to the days of *Noe*, but to the days of *Lot* and the destruction of *Sodom*. Now we know that the cities destroyed by fire from Heaven in the days of *Lot*, were wholly ignorant of their fate, till it came suddenly upon them. From this best authority therefore I conclude, that *Noe* did not proclaim to the world their destruction by the Deluge, since they knew nothing of it. And if the *Sodomites* or the

* Matth. xxiv. 29.

Antediluvians ſhould complain, that they had no warning given them of their deſtruction, God will no doubt be able to anſwer them in Judgment.

SECT. III.

Of Noah's *Ark and dimenſions; its ſufficient capacity demonſtrated by ſeveral Authors.*

MR. *C*—— in his *Antediluvian* Article has ſo little regard to truth and ſincerity, that though he was conſcious that the ſufficient capacity of the Ark, from the dimenſions given by *Moſes*, had been demonſtrated by ſeveral perſons, and even names the firſt who did it (if *miſcalling* one may be called naming him) yet he is pleaſed to throw in that ſtale objection of the *incapacity* of the Ark, which had been refuted over and over. And inſtead of aſſuring his readers, as he might have done, that thoſe who objected to the capacity of the Ark did it without reaſon, he delivers himſelf ſo doubtfully and *ſneeringly* upon the matter, as if he had a mind it ſhould be looked on, as a ſtrong objection to the truth of the Moſaic Hiſtory.

" *Celſus*, ſays he, long ago had *the criminal pre-*
" *ſumption* (this is exactly the language of Free-
" thinkers) to laugh even at the dimenſions of the
" Ark as given by *Moſes* of 300 cubits in length,
" 50 in breadth and 30 in height, which compared
" with the great number of things it was to con-
" tain, ſeemed to him too ſcanty, and therefore he
" calls *Noah*'s Ark κιβωτὸν ἀλλοκότον, an abſurd
" Ark.——Again, all thoſe difficulties, ſays he,
" are ſtarted by thoſe who favour *Moſes*'s relation of
" the animals brought into the Ark by *Noah*, and
" who ſuppoſe them incredible, if they were not to
" render the Ark fit for the reception of ſo large
" a family, either by making the Ark of a greater
" extent

" extent than that described by *Moses*, or by re-
" ducing the number of animals contained therein."
How absurd? Did those who favoured *Moses*'s relation, believe that relation incredible? Or did those who believed the relation true, start difficulties to make it appear false? Or was it a crime in those who believed *Moses*, to examine the dimensions of the Ark, and the number of animals to be taken into it, that they might shew the objection of its incapacity to be without any foundation?

At the first propagation of the Gospel, when the Sacred Books came to be read both by Believers and Unbelievers, some of the last, particularly *Celsus*, did with great confidence, though from mere ignorance and malice, affirm that an Ark of those dimensions given by *Moses* was utterly incapable to contain all the things said to be taken into it. This bold though ignorant assertion startled the Fathers, who being no better Geometricians than their adversaries (for their learning lay another way) did imagine that the *cubit* mentioned by *Moses*, was a *Geometrical* cubit, which is supposed six times larger than the common (if such a cubit really ever was in use.) But they were not aware of the inconvenience of this opinion, since to avoid one difficulty they run upon a much greater: for as the cubit must be the same throughout the whole history, and is the measure of the height of the waters above the mountains, as well as the dimensions of the Ark, to have made the waters instead of 15 to have risen 90 cubits above the hills had been prodigious indeed, as well as quite unnecessary: since the waters needed to rise no higher above the mountains, that that no living creature, not even the *Giants* should escape who might fly to the top of the mountains, or than the depth of water which the Ark might draw, so as to pass over them without danger of striking.

Some have ſuppoſed a *ſacred* cubit, which is ſaid to have exceeded the common by a *Span*, even as the *ſhekel* of the Sanctuary is ſuppoſed to have weighed more than the common; though others again, and perhaps more juſtly, are of opinion that the meaſures of the Sanctuary were only the ſeveral ſtandards by which all other meaſures were to be regulated, that they might be of juſt weight and meaſure. But there is no reaſon to think that *Moſes* meant any other cubit than that which was at that time in uſe. This indeed has been generally computed at a foot and a half, or 18 inches. But Dr. *Cumberland*, Mr. *Greaves* and others have ſhewn that the cubit in *Egypt* when the *Pyramids* were built exceeds a foot and a half of our meaſure, and that it comes nearer to 22 inches, or more exactly to 21-188, which would much enlarge the capacity of the Ark had it been meaſured by that cubit *.

Nevertheleſs thoſe who have undertaken to demonſtrate the ſufficient capacity of the Ark for all the uſes intended, as *Butaeo*, Bp. *Wilkins* and *F. Fournier*, have done it upon the common reckoning of a foot and a half to the cubit; and though I might refer to their performances, yet as theſe works are not in every ones hands, I ſuppoſe it will be more to his ſatisfaction, to lay here before the reader ſome demonſtrations of it; and firſt that of *F. Fournier*'s in his *Hydrography*.

* Sir *Walter Raleigh* after reckoning up the ſeveral cubits as the *common* at $1\frac{1}{2}$ foot. 2. The *Palm* cubit, which is a handful more. 3. The *Regius cubitus* or *Perſian*, which exceedeth the common by 3 inches. 4. The *Sacred*, which is double the *Common* wanting only a fourth part, and 5. the *Geometrical*, adds,——But of all theſe ſorts which were commonly meaſured by the *Vulgar* cubit, the alteration and diminution of men's ſtatures have made the difference. For as there is now a leſs proportion of bodies, ſo is the common cubit from the ſharp of the elbow to the point of the middle finger of leſs length than it was in elder times. p. 94.

F. Four-

F. Fournier's *Demonstration of the sufficient capacity of* Noah's *Ark.*

" Among the Heathens, says he, many made a " jest of the Ark, being persuaded that it was im- " possible it could contain all the animals, as *Moses* " assures us it did. The impious *Porphyry* said it " was a fable like to that of *Deucalion*. *Origen* in his " second Homily on *Genesis*, where he treats of the " fabrick of the Ark, tells us of one *Apelles*, a dis- " ciple of *Marcion* who was wont to say that scarce " four elephants could be placed there commo- " diously. To refute these impious fools, I will " not have recourse to the *Geometrical* cubit of nine " feet (six times greater than ours) as some have " done, but taking that space only which the Scrip- " ture gives me, and the cubit to be a common " one of a foot and a half, I shall demonstrate that " the Content of the Ark was more than sufficient " to contain all the animals preserved in the De- " luge.

" It is near 100 years ago since *Butaeo* (*whom* " *Mr. C——calls Bureo*) an excellent Geometrician " began to discover the ignorance and folly of those " authors who found fault with the dimensions of " the Ark, and to shew against those Infidels, that " there is nothing in the Scripture account of it " repugnant to reason or truth. The length of the " Ark, according to the Scripture account, was " 300 cubits, the breadth 50, and the height 30. " Upon this *Area* then I make 6 *squares*, each side " of which will be 50 cubits, which being multi- " plied by themselves will give 2,500 cubits square; " and as there are six equal squares the whole will " make 15,000 square cubits: and seeing the Ark " was 30 cubits high, we must multiply these

" 15,000

" 15,000 by 30, which will make the whole " 450,000 cubits ſquare, or 675,000 ſquare feet, " reckoning according to the common meaſure a " foot and a half to the cubit. From which con- " tents I will nevertheleſs ſubſtract that ſpace which " the floors, partitions and allies neceſſary to ſe- " parate the animals from one another &c. might " take up; although the roof, which was finiſhed " in a *cubit* above the 30 cubits, might in my opi- " nion be ſufficient to make up for all theſe defi- " ciencies. For the roof being in the middle of it " of a cubit height in form of a *Priſm*, it would " contain the half of its *Paralelipipidon*, that is, 7,500 " cubits, and therefore the whole content of the " Ark would be 457,500 cubits ſquare.

" This being laid down, I divide the whole con- " tent of the Ark into three ſtories, allotting the " lower for fourfooted beaſts. And ſince we have " ſhewed, that its *Area* or floor contained 15,000 " cubits, although we ſhould give 3,000 to the " partitions and allies for the more convenient paſ- " ſage of thoſe who were to range, feed and clean " them, we ſhall ſtill have 12,000 ſquare cubits " remaining, which ſpace I would divide into neſts " (as the *Septuagint* calls them) or rather into cab- " bins or ſtalls, each of which ſhould have 6 cubits " ſquare, and 36 in their *Area*, which is equal to " 54 feet: and if I give them 10 cubits or 15 feet " in height, there will be found 333 rooms or ſtalls, " and 12 cubits remaining over and above.

" Now *Ariſtotle*, *Pliny*, *Geſner* and *Aldrovandus*, " who have made the moſt diligent ſearch into the " *animal* kind, and wrote ſeveral volumes on that " ſubject, have not been able to find 150 original " different kinds, and of inſects, reptiles and ſerpents " could never reckon up 40. We find then in this " lower ſtory much empty ſpace, eſpecially ſince

" excepting

" excepting the elephant * (to whom nevertheless
" six or eight cubits square will suffice) there are
" few or no animals bigger than the horse or ox;
" and that in a Camp they allow no more space to
" a horse than 10 feet in length and 4 in breadth,
" which makes in the whole no more than an *Area*
" of 40 feet, whereas every one of our stalls here
" has 54 feet.

" It must be granted me then, that since there are
" few animals bigger than the horse, though there
" had been seven of every kind, they might all
" with ease have been placed in the lower story. But
" if with St. *Augustine* we say, that they were only
" those which the Scripture calls *clean* beasts that
" were taken in by sevens [*This is clear from the ex-*
" *press words of Scripture, Gen.* vii. 2.] and that all
" those animals were excluded, which are gendered
" by different kinds, as well as amphibious crea-
" tures, fishes and those which are bred of putre-
" faction [such was the common opinion at the time
" our author wrote] and the like, there will be abun-
" dance of room to spare.

" Let us now come to the second story. To
" this middle story I give 8 cubits or 12 feet in
" height for a Granary, which will be more than
" sufficient to contain all the food necessary for
" those animals. In two thirds of it which will
" contain 80,000 cubits square, or 120,000 square
" feet we shall place our hay and straw, since there
" are very few animals that cannot live on these.
" In the other part we shall find 40,000 cubits or

* Our author here makes the height of the first story 10 cubits, and it could be no higher. In *India* and *Ethiopia* elephants are said to be of 10 cubits height or more. But elephants live to a great age, and are many years in coming to their full height. There was no need to take into the Ark two of age and full grown: two young ones were sufficient, which might not be 7 or 8 cubits high.

" 60,000

" 60,000 ſquare feet, ſpace enough to contain as " much grain or corn, as would ſuffice a pretty " large town for a twelvemonth. All this then " put together, will be more than ſufficient, for the " food of all the animals, eſpecially conſidering that " in the rooms or ſtalls, which remained in the " lower ſtory, many creatures might be put for the " nouriſhment of thoſe who live on prey.

" In the third or upper ſtory, although we ſhould " give one third thereof to *Noah* and his family, " there will ſtill remain much more room than we " need for all the winged or feathered Tribe; ſince " in *Aldrovandus* we cannot find 150 different kinds, " of which there are few bigger than a *Swan*. Of " this ſpace giving one half to the birds of prey, " and the other half to the reſt, all of them will " have large room to ſkip about at their eaſe. We " conclude therefore that all the creatures that live " on the land were preſerved in the Ark of *Noah*." Thus he.

I intended next to have given the learned Biſhop *Wilkins*'s Demonſtration of the Ark's ſufficient capacity &c. but as it takes up ſix pages in *folio* beſides the *Diagram* or Draught of the Ark, it is too long for this place. I ſhall however ſet down ſome of his general and judicious remarks, with an abſtract of ſome things in it.

Abſtract of Biſhop Wilkin'*s Demonſtration of the ſufficient capacity of* Noah'*s Ark.*

" He obſerves that there is a great difference be- " twixt thoſe opinions and apprehenſions, which " are occaſioned by a more general and confuſed " view of things, and thoſe which proceed from a " more diſtinct conſideration of them, as they are " reduced into order.

" He

" He that looks upon the ſtars, ſays he, as they " are confuſedly ſcattered up and down in the fir- " mament will think them to be (as they are ſome- " times ſtiled) innumerable, of ſo vaſt a multitude, " as not to be determined to any ſet number; but " when all theſe ſtars are diſtinctly reduced into " particular Conſtellations, and deſcribed by their " different places, magnitudes and names, it ap- " pears that of thoſe that are viſible to the *naked* " eye, there are but a few more than a thouſand in " the whole Firmament, and but a little more " than half ſo many to be ſeen at once in any *He-* " *miſphere*, taking in the minuter kinds of them " to ſix degrees of magnitude. It is ſo likewiſe in " other things. He that ſhould put the queſtion, " How many ſorts of beaſts or birds &c. there are in " the world, would be anſwered even by ſuch as are " otherwiſe knowing and learned men, that there " are ſo many hundreds of them as could not be " enumerated; whereas upon a diſtinct enquiry " into all ſuch as are yet known, and have been " deſcribed by credible authors, it will appear that " they are much fewer than is commonly imagined, " not a hundred ſorts of beaſts, nor two hundred " of birds.

" From this prejudice it is, that ſome Hereticks " of old, and ſome atheiſtical Scoffers in theſe later " times have taken the advantage of raiſing objec- " tions (ſuch as they think unanſwerable) againſt " the truth and authority of the Scripture, parti- " cularly as to the deſcription which is given by *Mo-* " *ſes* concerning *Noah*'s Ark. *Gen.* vi. 15. where the " dimenſions of it are ſet down to be 300 cubits in " length, 50 in breadth and 30 in height; which " being compared with the things it was to contain, " it ſeemed to them upon a general view (and they " confidently affirmed accordingly) that it was ut- " terly impoſſible for this Ark to hold ſo vaſt a

' multi-

" multitude of animals, with a whole year's provi-
" ſion of food for each of them.

" It is plain in the deſcription which *Moſes* gives
" of the Ark, that it was divided into three ſtories,
" each of them of 10 cubits or 15 feet high, be-
" ſides one cubit allowed for the declivity of the
" roof in the upper ſtory. And it is agreed upon
" as moſt probable that the lower ſtory was aſſigned
" to contain all the ſpecies of beaſts, the middle
" ſtory for their food, and the upper ſtory in one
" part of it for the birds and their food, and the
" other part for *Noah*, his family and utenſils.
" Now it may be clearly made out that each of the
" ſtories was of a ſufficient capacity, for the con-
" taining all thoſe things to which they are aſ-
" ſigned."

[This he does by enumerating the ſeveral kinds of beaſts, and reducing them into *claſſes* according to their food. 1. Such as feed on hay. 2. Such as feed on fruits, roots and inſects, and 3. Carnivorous beaſts, diſtinguiſhing the clean from the unclean: of the clean reckoning 17 ſpecies *ex abundanti.*]

" And though it ſeem moſt probable (he goes on)
" that before the Flood, both men, beaſts and birds
" did feed only upon *vegetables*, as may appear from
" *Gen.* i. 29, 30. compared with chap. ix. 3. where
" after the Flood, when the productions of the
" earth were become of leſs efficacy and vigour, and
" conſequently leſs fit for nouriſhment, God ſaith
" to *Noah*, *Every moving thing that liveth ſhall be*
" *meat for you*; *even as the green herb have I given*
" *you all things*; yet becauſe this proof is not ſo
" very cogent to convince a *captious* adverſary, but
" that he may be ſtill apt to queſtion, whether the
" rapacious kinds of beaſts and birds, who in the
" natural frame of their parts, are peculiarly fitted
" for the catching and devouring of their prey, did
" ever feed upon herbs and fruits; therefore to pre-
" vent

" vent such *cavils*, I shall be content to suppose, " that those animals which are now *prædatory* were " so from the beginning. Upon which it will be " necessary to enquire what kind of food might be " proper and sufficient for them during their abode " in the Ark. Now 'tis commonly known that " the *ruminant* kind are most usually the prey of the " *rapacious* kind of beasts."

[Here having before reckoned up the beasts of the carnivorous kinds to be 40 in all or 20 pair only, and what proportion they bear to a wolf, he computes that it might require 1,825 sheep to serve them for a year, and shews that there was in the lower story in the Ark sufficient room for all these also. And having next shewed the sufficient capacity of the second and third stories for the uses they were designed, he concludes the whole thus.]

" Upon the whole matter, it doth of the two " appear more difficult to assign a sufficient num- " ber and bulk of necessary things to answer the " capacity of the Ark, rather than to find sufficient " room for those several species of animals already " known. But because it may be reasonably pre- " sumed, that there are several other species of birds " and beasts, especially in the undiscovered parts " of the world, besides those here enumerated, " therefore it is but reasonable to suppose the Ark " of a bigger capacity than what may be sufficient " for the things already known. And upon this " account it may be asserted, that if such persons " who are most expert in Philosophy or Mathema- " ticks were now to assign the proportions of a ves- " sel, that might be suitable to the ends here pro- " posed, they could not, all things considered, find " any, more accommodate to these purposes than " those here mentioned.

" From what hath been said it may appear, that " the measure and capacity of the Ark, which some

" atheistical

" atheiſtical irreligious men make uſe of as an ar-
" gument againſt the Scripture, ought rather to be
" eſteemed a moſt rational confirmation of the truth
" and Divine authority of it. Eſpecially if it be
" well conſidered, that in thoſe firſt and ruder ages
" of the world, when men were leſs verſed in arts
" and philoſophy, and therefore probably more ob-
" noxious to vulgar prejudices than now they are,
" yet the capacity and proportions of the Ark are
" ſo well adjuſted to the things it was to contain.
" Whereas if it had been a mere human inven-
" tion, 'tis moſt probable that it would have been
" contrived according to thoſe wild apprehenſions,
" which as I ſaid before, do naturally ariſe from a
" more confuſed and general view of things, as
" much *too big*, as now ſuch men are apt to think
" it *too little* for thoſe ends and purpoſes for which it
" was deſigned *."

To the two former let me add the ſentiments of our Hiſtorian Sir Walter Raleigh.

——" How the appointed number of the crea-
" tures to be ſaved, that is, ſeven of the clean, and
" two of the unclean, with neceſſary food, might
" have place in the Ark, *Butaeo* hath very learned-
" ly declared; the brief ſum of whoſe diſcourſe to
" that purpoſe is this. The length of the Ark was
" 300 cubits, which multiplied by the breadth,
" namely 50 cubits, and the product by the height
" of 30 cubits ſheweth the whole concavity to have
" been 450,000. Now whereas the poſts, walls,
" and other partitions of lodgings, may ſeem to
" have taken up a great part of the hollow, the
" height of the roof which (the perpendicular being

* *Wilkin*'s Eſſay towards a real Character and a Philoſophical Language, p. 162. & ſeq.

" one cubit) contained 7,500 cubical cubes was a
" sufficient recompense. If therefore in a ship of
" such greatness we seek room for 89 distinct species
" of beasts, or, lest any should be omitted, for 100
" several kinds, we shall easily find place both for
" them and for the birds which in bigness are no way
" answerable unto them, and for meat to sustain
" them all. For there are three sorts of beasts,
" whose bodies are of a quantity best known; the
" Beeve, the Sheep and the Wolf, to which the
" rest may be reduced, by saying with *Aristotle*,
" that one elephant is answerable to four beeves,
" one lion to two wolves, and so of the rest. Of
" beasts some feed on *vegetables*, others on flesh.
" There are one and thirty kinds of the greater sort
" feeding on *vegetables*, of which number only three
" are clean according to the law of *Moses*, whereof
" seven of a kind entered into the Ark, namely,
" three couples for breed, and one odd one for sa-
" crifice: the other twenty eight kinds were taken by
" two of each kind, so that in all, there were in the
" Ark, one and twenty great beasts clean, and 56
" unclean, estimable for largeness as 91 beeves, yet
" for a supplement, (lest any species be omitted)
" let them be valued as 120 beeves. Of the
" lesser sort feeding on vegetables, were in the Ark
" 26 kinds, estimable for good allowance for supply
" as fourscore sheep. Of those which devour flesh
" were two and thirty kinds, answerable to 64
" wolves. All these 280 beasts might be kept in
" one story or room of the Ark in their several cab-
" bins, their meat in a second, the birds and their
" provision in a third, with place to spare for *Noah*
" and his family and all their necessaries *."

What becomes now of *Celsus*'s absurd Ark? When *Butaeo*, *Raleigh*, *Wilkins* and *Fournier*, men

* *Raleigh*'s History. Book I. chap. 7. sect. 9.

of learning who underſtood the matter, as well as others later, have demonſtrated it to be, a *rational* Ark, and fully ſufficient, wiſely contrived and adapted to all the purpoſes it was intended? And how could it be otherwiſe, when the dimenſions of it were given by that High Wiſdom which knoweth all things, and ordereth all things *in meaſure and number and weight?* And what elſe have *Celſus* and *Porphyry*, *Apelles* and the reſt of the Infidel tribe done by their objections againſt the capacity of the Ark, but ſhewn their own ignorance and folly, as well as malice in pretending to judge of things they underſtood not; ſince the very thing they object againſt (as Bp. *Wilkins* juſtly obſerves) is a moſt rational confirmation of the truth and Divine authority of the Scripture? And what are we to think of him who at this time of day retails ſuch ignorant objections which have been long ago confuted by demonſtrations?

But here we may obſerve 1. That the number of the ſeveral kinds of animals is not the ſame in all the authors I have quoted. The reaſon of this difference may be, either that ſome of them have reckoned more of thoſe animals which have been lately diſcovered in *America* and other formerly unknown countries, ſome leſs: or elſe that ſome reckon certain animals to be of a different ſpecies, which others account to have been originally the ſame. Concerning which let us hear once more our judicious Sir *Walter Raleigh*.

——"It is manifeſt and undoubtedly true, that "many of the ſpecies which now ſeem differing "were not then (i. e. before the Flood) *in rerum* "*natura*. For thoſe beaſts which are of mixt na- "tures, either they were not in that age, or elſe it "was not needful to preſerve them, ſeeing they "might be generated again by others; as the *Mules*, "the *Hiaena*'s and the like, the one begotten by aſſes "and mares, and the other by foxes and wolves.

"And

" And whereas by discovering of strange lands
" wherein there are found divers beasts and birds,
" differing in *colour* or *stature* from those of these
" *Northern* parts, it may be supposed by a superfi-
" cial consideration, that all those which wear *red*
" and *pyed* skins or feathers are different from those
" that are less painted, and wear plain *russet* or
" *black*, they are much mistaken that so think.
" And for my own opinion I find no difference
" but only in magnitude, between the *cat* of *Eu-*
" *rope* and the *ounce* of *India*; and even those dogs
" which are become wild in *Hispaniola* with which
" the *Spaniards* used to devour the naked *Indians*,
" are now changed to wolves, and begin to destroy
" the breed of their cattle, and do oftentimes tear
" asunder their own children. The common crow
" and rook of *India* is full of red feathers in the
" drowned and low Islands of *Caribana*: and the
" blackbird and thrush hath his feathers mixt with
" black and carnation in the north parts of *Virginia*.
" And the *dog-fish* of *England* is the *Shark* of the
" *South* ocean. For if *colour* or *magnitude* made a
" difference of *species*, then were the *Negroes*, which
" we call the Black mores, *non animalia rationalia*,
" not men but some kind of strange beasts; and so
" the *Giants* of the South *America* should be of ano-
" ther kind, than the people of this part of the
" world. We also see it daily, that the natures of
" fruits are changed by transplantation, some to
" better, some to worse, especially with the change
" of climates. *Crabs* may be made good fruit by
" often grafting, and the best *melons* will change in
" a year or two to common *cucumbers*, by being set
" in a barren soil. Therefore taking the kinds pre
" cisely of all creatures, as they were by God
" created, or out of the earth by his ordinance pro-
" duced, the Ark after the measure of the common
" cubit, was sufficiently capacious to contain of all,

" according to the number by God appointed. For
" if we add but half a foot of measure to the com-
" mon cubit, which had a foot and a half of *giantly*
" stature (and less allowance we cannot give to the
" difference between them and us) then did the Ark
" contain 600 feet in length, and 100 feet in
" breadth, and was 60 foot deep *."

SECT. IV.

A farther Inquiry into the Content of the Ark; and the several things necessarily to be taken into it.

THE Reader may observe that all the three forenamed authors have supposed, that those animals which are now rapacious or carnivorous, were fed in the Ark with flesh, for which end Bp. *Wilkins* has made a very large provision, no less than 1,825 sheep; but it may be observed too, that he has done it only to prevent the cavils of *captious* adversaries, for that in his own judgment, it appeared most probable, that before the Flood, both men, beasts and birds did feed only on *vegetables*. And this indeed I take to be the truth of the matter. 1. From the food appointed for all the animals in general, at the beginning. *And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein is life, every green herb for meat* †. Now though man's food at first was much the same, *viz.* vegetables and fruits which

* *Ibid.* Now that Sir *W. R.* was not mistaken in judging the *Antediluvian* cubit (by which the dimensions of the Ark were given) to be 2 foot of our measure, appears from the instance of a young man of *Ireland*, shewn at *Oxford* 1684, who was 7 foot 6 inches high, and whose cubit was 2 foot 2 inches. *Lowthorp*'s Abridgment, vol. III. p. 1.

† Gen. i. 30.

the

the earth brought forth of itself without his culture, yet after his Fall, bread was added to be produced by tilling the ground; either because his body had suffered a change by the Fall, or that the earth's first fertility was somewhat abated and its productions not so efficacious and nutritive as before, or for both these; but I can see no necessity for changing or adding to the food of other animals, whose lives were not to be lengthened out to the age of man, they coming much sooner to maturity, and multiplying much faster than mankind does; and though in the rapacious birds and beasts the natural frame of their parts be peculiarly fitted to catch and devour their prey, yet may their stomachs also be fitted to digest vegetables (as that of man's is to both flesh and vegetables) upon which I suppose they now often feed also, or else would many times starve; and in the Ark it was only necessary to keep them alive, not to feed them to the full. 2. Because the animals that were reckoned unclean (and such are all of the rapacious kinds) were ordered to be taken in only by two's, male and female, and the clean by sevens only; so that there could not be such a number of sheep or other clean animals as Bp. *Wilkins* thought good to allow, and 3. Because the provision to be made is expressed in these words. *And take thou unto thee of all food that is eaten, aud thou shalt gather it to thee, and it shall be for food for thee and for them.* Now the gathering of all kinds of food seems restricted to vegetables, corn, &c. 4. Because the slaying, skinning and dividing so many animals for the sake of the rapacious kinds, without absolute necessity, would have been so great an addition to the labour of the family (which we shall find to have been great enough without it) that I think it would have been avoided if possibly it could, as here it might be; since though those animals had been wont to live on flesh, they could yet live for a

time without it, if they had ſufficiency of other things. And therefore though thoſe grave and learned authors I have quoted, did very well to allow for ſuch proviſion for the preſent carnivorous kinds of birds and beaſts, to ſhew that notwithſtanding all this, there was ſufficient room in the Ark and to ſpare: yet in an Enquiry after Truth, I ſee no reaſon to give up any point, which I do not think to be true, to the cavils of unreaſonable and captious men; and therefore for the reaſons I have given, do not think there was any proviſion of fleſh made for the rapacious animals in *Noah*'s Ark.

But in ſo doing it may be thought I have only made ſo much more needleſs work for myſelf; for if notwithſtanding the room allowed for proviſion of fleſh for the carnivorous animals, Bp. *Wilkins* was of opinion "that of the two, it doth appear more "difficult, to aſſign a ſufficient number and bulk "of neceſſary things to anſwer the capacity of the "Ark, rather than to find ſufficient room for thoſe "ſeveral ſpecies of animals already known," if we ſhall diſcharge the 1,825 ſheep, which he had allowed, and which would take up a good deal of room, then there will be ſtill a greater vacancy; and if we ſhall beſides allow of what Sir *Walter Raleigh* believes, that the *cubit* by which the Ark was meaſured was the *Antediluvian* cubit according to the ſtature of thoſe firſt men, which could not be leſs than 24 inches, or two feet of ours (which ſeems but reaſonable) and that thus the length of the Ark would be 600 of our feet, the breadth 100, and the height 60. Hence I ſay a very great difficulty, or ſtrong objection may be raiſed againſt its being made ſo much larger than neceſſary. For to what purpoſe was there ſo much waſte of time and labour to make it ſo much biger than was needful?

Now to remove this difficulty and anſwer this objection it might ſuffice to ſay, though we had nothing

thing else to offer, that it was absolutely necessary that the Ark should be of much larger capacity in all its dimensions, than barely to hold the family, the animals and their several foods; and that, for the free circulation of the air, for the preservation of the life and health of those contained in it. Had there been no more space than barely to stow the things contained in it, the air would probably have stagnated and corrupted to the endangering of both health and life, as well as to the spoiling the stores of provisions laid up in it, especially as the Ark was close shut up, there being but one window in it. The ingenious and learned Dr. *Arbuthnot*, in his *Essay concerning the effects of air on human bodies* *, remarks, "That the *Effluvia* of *human* live bodies "are extremely corruptible. The water in which "human creatures bathe, by keeping smells cada-"verous. Less than 3000 human creatures liv-"ing within the compass of an acre of ground, "would make an *Atmosphere* of their own steams "about 71 feet high, which if not carried away "by winds, would turn pestiferous in a moment. "From whence it may be inferred, that the very "first consideration in building of cities, is to make "them open, airy and well perflated. Pestilential "constitutions have been often preceded by great "calms. From hence the air of prisons produceth "often mortal diseases, and ships crews turn sickly "in bays and harbours, which would be healthy in "the open sea."——But though our author speaks here only of the *Effluvia* of human bodies, yet the *Effluvia* of other animals may in some degree have like effect, especially where the steams had but 10 cubits height to arise; and though the number of all the living creatures within the Ark were much short of the number here mentioned by him, yet

* P. 17.

as all the four-footed beasts were in one story, it was very necessary that there should be space enough for the free circulation of air.

But besides this general and apparent reason for the largeness of the Ark, there were many other things to be taken into it over and above their dry food, which have not been much adverted to by authors. And

1. A very large quantity of water was to be provided sufficient for the whole time of their abode in the Ark, without which neither men nor animals can live. The great difficulty will be how to keep it sweet for so long a time. To this end it could not be kept in close casks as they are obliged to do at Sea, and which is the reason I suppose of its corrupting, but in large tubs open at the top, or in some large cisterns at each end, as the filling them with water might be part of the women's task while the men were employed in more laborious work. Rain water will keep sweet for a very long time, but that probably they could not have, since it is more likely that it had not rained for several months before the Deluge, all the vapours exhaled by the Sun, being fast bound up by the clouds, till the time came to pour them down on the earth; yet *Bristol* water (and doubtless many such waters there are besides, of like nature) as well as the waters of some rivers will keep sweet a twelvemonth; particularly of the water of the *Ganges* which is carried a hundred miles by the *Banians* out of devotion; it is said that it does not corrupt, nor will it stink how long soever kept, so that there might be no great difficulty in finding a sufficient quantity of proper water *.

2. A

* Against the necessity of providing a sufficient quantity of water to serve for all needful uses during the whole time of their abode in the Ark, two objections may lie.

1. That

2. A very large quantity both of lights and fewel were to be provided to serve their occasions during their abode in the Ark. The *Antediluvians* had nights and winters as well as we, and without question could furnish themselves with what was necef-

1. That it does not seem necessary that any great quantity of water should be laid up in the Ark, since by letting down vessels from the window, they might draw up from time to time sufficient for their use. 2. That in the violent agitation of the Ark for some time, it does not appear how water could be kept in open tubs or large cisterns. In answer to the first of these objections it will soon appear, that no water fit for use could be got any manner of way after they were entered and shut up in the Ark. 1. Not rain water collected at the window, how large soever it might be, because during the 40 days rain, probably accompanied with thunder and lightning especially at the first, the window behoved to be close shut, to defend them from the violent rains; since for that purpose the Ark was not only made sloping in form of a prison, but had a covering over it besides; by both which the rain would have been thrown off at some distance from the window, so that they could not well catch it, though the rains had not been attended with thunder and lightning. 2. No water could have been drawn up by vessels from the window fit for use after the rain ceased, for as the fountains of the Great Deep were broken up the same day the rains began, and thereby the Seas were poured out on the earth, which carried a mixture of all things with them; the floating waters therefore would have been so salt, or brackish and muddy, that they would have been utterly unfit for the use of the men and animals enclosed. Not to insist that the distance from the window (which was in the upper story and near the roof) to the surface of the waters was too great, to draw up water from thence without more time and labour than could be spared. For though the Ark should draw 12 or 13 cubits of water, that is 24 or 26 feet, according to Sir *Walter Raleigh*'s measure, there would yet remain above 30 feet more from the surface of the waters to the window, too great a depth to draw up any quantity of water daily by mere strength of arm.

To the second objection, I say that the Ark stood firm on the ground, till the waters had risen to 24 or 26 feet or more, when it would begin to be lifted up and float; but when the waters were at that height, and of an equal surface over all, there would be no violent agitation, tho' a gradual increase of the waters (as there was no wind) till they had reached the height designed. For these reasons I conclude that the whole quantity of water needful was laid up in the Ark, before *Noah* entered into it.

sary

ſary for both, as well as we do now. As to the conveniency of light, becauſe the word *Zohar*, which we tranſlate *window*, is derived from a verb, that ſignifies to *burn* or *ſhine*, ſome have imagined ſomething elſe to be meant, as a large *Carbuncle* or a *Phoſphorus*, or ſome ſuch artificial compoſition, but theſe are vain fancies; nothing of that kind could give light ſufficient to a tenth part of one of the ſtories, whereas light would be wanted daily in all the three, in the upper for themſelves and the fowls, in the Granary to fetch the proviſions neceſſary, and in the lower for the feeding the fourfooted beaſts and reptiles, and that at leaſt twice a day. And as lights, ſo fewel would be daily wanted for firing, both for warmth and dreſſing their victuals. Though the *Antediluvians* lived on vegetables, fruits and corn, yet we can hardly think that they eat all theſe raw, but that they dreſſed them by fire, and could make even dainty diſhes out of them. To this purpoſe, a *Miſſionary* in the Iſle of *Tsong Ming* oppoſite to the mouth of the river *Kiang* in *China* relates, "That "the inhabitants from the grain of ſome herbs (he "had before mentioned) expreſs an oil which ſerves "inſtead of butter, and is of great uſe in ſawces. "The Cooks in *France*, ſays he, who have refined "the moſt on what may raiſe the appetite, would "be ſurprized to ſee, that the *Chineſe* had carried "the invention with reſpect to *Ragouſts* yet farther "than they have done, and at much leſs expence. "One would hardly believe, that with plain Beans, "which come to them from *Chantong*, and with "the flower which they draw from Rice, and their "corn or wheat, they prepare an infinite number "of diſhes, all different from one another to the "eye and to the taſte." Now I cannot think but that the *Antediluvians* were as ingenious this way as the *Chineſe*. But beſides fires neceſſary to bake their bread and dreſs their victuals, they would

want

want them also for warmth against the cold in winter, which would be increased, by the whole earth's being covered with water. Fires then we see were absolutely necessary, and a large stock of fewel therefore to be laid in. There is no mention of Funnels for vent of the smoke indeed in the Text, any more than of tubs and cisterns for water (which they could not be without) nor was it needful. An Architect who had the dimensions of a house given him as to its length, breadth and height, and number of stories, need not be told that he was to make chimneys for fire in all the Lodging-rooms; so *Noah* having the dimensions of the Ark given him, with its division into three stories, with separate stalls or cabbins, as to all other things necessary or useful for his family or the animals, he was left to order and provide them according to his wisdom; and he had sufficient time to think of all things that would be wanted, while he was employed in the fabrick of the Ark.

3. I do not suppose *Noah* and his sons would throw away the tools with which they had built the Ark, but as they would want all manner of necessary instruments at their first coming out of the Ark, and that it must be a considerable time ere they could make tools of any kind for themselves, or dig into the bowels of the earth for iron, the most useful of all metals; we may take it for granted, that they would take into the Ark with them all things they stood in need of to begin the world a-new, all manner of tools and instruments for building, husbandry, gardening &c. eight tents at least for themselves (the women's tents being separate from the men's) all manner of houshold and kitchin-furniture, as well as plenty of garments, and of every thing else that might be needful or useful to them in the new world. All which things considered, the difficulty of filling so large and capacious an Ark will

will now vanish, since we find there were so many other things to go into it, besides the animals and their dry food. If it should be asked how I come to know all this? I answer 'tis easily known, because all these things were necessary or useful, and that I believe *Noah* at 600 years old, to have been a wise man as well as a good man, and that every considerate person would have taken the same care in the like case.

4. But there is yet something farther to be considered with respect to *air*, so necessary to the life and health of the men and animals contained in the Ark. That there was a window in the Ark is evident, for out of it *Noah* sent forth the *raven* and the *dove*. Now by opening this window now and then, there would be a strong suction or indraught of air in so large a building, and a free circulation of it from top to bottom. And thus the *Effluvia* or steams issuing from the bodies of living creatures, would be dispersed, and fresh air let in as often as was necessary. Here Mr. *C*——asks by what means *Noah* could know, how many days he was in the Ark since all was in darkness? a sure sign that he never read or consulted any of the authors on this subject, when he took it into his head to write on it; since he might have seen in both *French* and *English* authors, *draughts* of the Ark with the animals in the second story, and the sides mostly open, which might have at least prevented his asking such a silly question. But though I take this disposition to be wrong, as I shall shew presently, yet *Noah* was not without means of distinguishing day from night, though he should have had neither clock nor watch in the Ark: for I do not suppose the window to have been close shut up with boards, but to have been so made as to let in the light, though not perhaps a Glass window; which is but a late invention, and not used in all countries. Even so

late as in the end of the last Century, multitudes of houses in the polite city of *Paris* had no glass in their windows, but oiled paper or some such thing. Now I must needs think that the *Antediluvians* were as good at inventions and contrivances as the *Post-diluvians*; and if they had cities as early as the days of *Cain*, they must have had houses of which those cities consisted, and if they had houses they had windows that would let in the light, though not made of glass. What we translate a window some Translators render it thus, *a clear light shalt thou make to the Ark, and in a cubit shalt thou finish it* (that is, the Ark) *above.* By which it appears they took it not for a window shut up with shutters, but for a window that gave light, and how large that might be, is not said, not a very little one to be sure in so large a building, and which was to give light to the family. For the words *in a cubit shalt thou finish it above*, do not refer to the *window*, but to the *Ark*, otherwise the description of the Ark had been defective, without any direction for the roof, which by these words is ordered to be made declining from the middle, the length of a cubit, and in form of a Prism, for the more speedy descent of the rain which fell upon it.

5. Let us next consider the placing of the animals. Bp. *Wilkins* and *F. Fournier* have placed them in the lower story, as generally agreed on to be the most convenient, nevertheless *F. Calmet*, the authors of the *Universal History*, and Mr. *Stackhouse* in his *History of the Bible* have placed them in the middle story, which they have made mostly open on both sides for the benefit of air to the animals, as may be seen in the draughts or *Prospects* of the Ark in their several works, at least on one side; for the Prints cannot give us a prospect of both sides at once. But this their disposition of the animals I take to be wrong for several reasons. In the description of the Ark,

Ark, we have it divided into three ſtories with a door in the ſide of it, and a window. Now it is moſt natural to ſuppoſe the door to have been in the middle of the Ark, and alſo in the loweſt ſtory, as being by much the moſt convenient; for though the animals and reptiles might have got up to the ſecond ſtory by a gradual aſcent contrived for that purpoſe, yet was it far more eaſy and convenient both for their going in and coming out again, for them to be ſtationed in the lower ſtory. I ſhould likewiſe have thought that the ſtairs from the loweſt ſtory to the higheſt, might go up directly from the door in the middle, and the window be oppoſite to both in the upper ſtory, as theſe ſeem in ſome reſpects the moſt convenient poſitions; but Bp. *Wilkins* places ſtairs at each end of the Ark, which in other reſpects might be likewiſe convenient, as the fire *hearths* might be at each end of the upper ſtory, the one for the men and the other for the women, for as the ſons marriages were not yet conſummated, they would keep their lodgings ſeparate; and indeed I ſee no reaſon why there might not have been ſtairs both in the middle and at each end, which conſidering the length of the Ark, of 600 foot, would be convenient for the family, and there wanted not room for them.

2. I cannot admit of the Ark's being open all round in any of the ſtories, or even on one ſide of it. During the 40 days rain, which was probably attended with thunder and lightning (to ſtrike the greater terror on the wicked devoted to deſtruction, and as it has happened in the like caſes ſince, the Ark had more need to have been cloſe ſhut up. Nor was ſuch an opening at all neceſſary to the animals, ſince they can live not only under covert, but even under ground, which is evident from the practice in ſeveral coal-pits, into which horſes are let down for turning engines, and where they will live ſeveral years;

years; and in the salt-mines near *Cracow* in *Poland*, there are always three horses to draw the salt to the openings.

3. The lower story was by no means fit for the *Granary* or *Storehouse* of provisions, for as that would be all or most of it under water, the dampness arising thence would affect and spoil the provisions, for the preserving of which the second story seems much the most convenient.

This method of theirs seems preposterous, for whoever put the horses or cattle in the loft above, and the hay and straw in the stalls below? Whereas the hay being placed in the loft above, and a small space left between the floor and the wall, it is easily let down into the *Racks* below. And thus if the larger animals were stalled along the sides of the Ark, they might all have their provender let down to them after the same manner, which would save some trouble to the family, who in that case had only provisions to bring down to the lesser animals stationed in the middle. For these reasons I conclude that the lower story was the station of the animals, who could not want air, considering the largeness of the Ark, and the letting in fresh air as often as necessary by the window, which would pervade all the stories even to the lowest.

There are two or three questions more that may be moved with respect to the animals in the Ark, as

1. Whether by taking in the clean animals by sevens, be meant seven pair or seven single, that is, three pair and one odd? It is not very clear by the Text, which was intended. Some think it was seven pair, others that it was only three pair, and that the odd one was in order to that sacrifice which *Noah* offered after his coming out of the Ark, *viz.* one of every clean beast and bird, as *Abraham* did afterwards. Of this last opinion is Bp. *Wilkins*, and I am inclined to think it the most probable, because three

three pair of each would be ſufficient to ſtock the new world and to ſerve the family ſaved, ſince in a few years they would increaſe as faſt as they could have occaſion for them, the diſtinction of clean from unclean at this time being only with reſpect to ſacrifices, and not to food; as to food after the Deluge it was lawful for them to eat of every kind of animals, they beſt liked; in this there was then no reſtriction, but * *Every moving thing that liveth ſhall be meat for you, even as the green herb have I given you all things*, and 'tis probable they would not eat of animal food at firſt, having not been accuſtomed to it before.

2. Whether all the kinds of animals, birds, beaſts and creeping things, were to be ſought for and gathered together by *Noah* and his ſons, or if they came to him by inſtinct and impulſe? That it could not be in the firſt way ſeems pretty evident for theſe reaſons. 1. They could not be gathered together of a ſudden. It would require a good deal of time and pains to aſſemble them by degrees, which I think *Noah* could not well ſpare from other neceſſary labours †: having beſides the building of the Ark all kinds of food to gather for himſelf and them. 2. As the animals were gathered they muſt have been confined, and fed even before the Ark was ready to receive them, which would have been a double trouble and expence of food. 3. Every kind of every living thing to be ſaved, might not be

* Gen. ix. 3.

† The outward frame of the Ark was not much above half the work, for beſides the floors and the ſtairs, the tubs or ciſterns for water, the cabbins or ſtalls for the beaſts, neſts or diviſions for the fowls and diviſions in the ſtorehouſe, for the ſeveral ſorts of food, it would be neceſſary to have two walls or rows of pillars running croſs from ſide to ſide to ſupport the floors and the roof; the breadth being 50 cubits or 100 feet, would neceſſarily require it, if even that would ſerve, and perhaps that great breadth might require three ſuch ſupporters.

within

within *Noah*'s reach, nor even within his knowledge. He might not know all of them, nor be able to come at all of them, if he did. Many of them were wild, and not easy to be managed till they were confined and in the dark. I therefore think it far more probable, that they all came to him of their own accord, after all things were ready and a little before he himself entered into the Ark; that they were brought to him, even as God had at first brought them to *Adam* when he gave names to them all. And he that could order even ravens to carry flesh and bread, morning and evening to the Prophet *Elijah* by the Brook, could as easily order every kind of living creatures to travel to the Ark and enter into it. And this seems confirmed by the Text. *Two of every sort shall come unto thee to keep them alive* *.

3. It is queried how the dung of all the animals was conveyed away, which was necessary to be done both for their health and cleanliness? To this end some have imagined a double bottom to the lower story, where the four-footed beasts were stalled, the upper of which might be so contrived that the dung and urine of the animals might fall or be swept through it into the lower. But such a thing could not possibly be. For to have left such a space between these two bottoms as to contain the dung of all the animals for more than twelve months, would have taken up so much of the height of that lower story as the remainder would not have sufficed for the animals themselves, but that they would be in danger to be stifled for want of free air. 2. Though there had been room for it, it had been highly inconvenient, because the steams arising both from the bodies and the dung of the animals in so close

* Genes. vi. 20. Ex omnibus bina venient ad te, *i. e.* meo instinctu et sua sponte, ut olim fiterat Adamo Deus. Sic non erit opus venatione vel aucupio. *Junius.*

a place, muſt needs have made the air infectious, and 3. The weight of the dung in ſo long a time might have endangered the true bottom of the ark itſelf. This could not poſſibly therefore be the caſe. Indeed I know no other way poſſible or probable (though a laborious one it was) but that the eight perſons in the Ark, ſhould every day, or as often as they ſaw needful, clean all the ſtalls and aviaries, carry the dung to the upper ſtory, and throw it out of the window.

And now if we reflect on the ſeveral particulars mentioned, and conſider the daily and troubleſome occupation of *Noah* and his family, in feeding and watering all the animals and cleaning all the *ſtalls* and *aviaries*, beſides what was neceſſary to be done for themſelves. If we reflect moreover on that heavineſs of heart they muſt have been under for the deſtruction of all mankind (among whom no doubt they had ſeveral relations and kindred) and of every living creature upon the earth; as alſo on that dread and terror, with which ſo ſtupendous a judgment muſt affect them, when the heavy rains deſcended, the lightning flaſhed, and the thunder roared, we may in ſome meaſure conceive the afflicted and laborious life they led during their confinement for a year in the Ark; and may truly ſay, that when the vengeance of a righteous God was poured forth on a wicked world, *ſcarcely* or with difficulty, were the righteous ſaved.

SECT.

SECT. V.

Whether more than eight persons were saved in the Ark? And of the Origin of servitude after the Flood.

I Had no thoughts of making this any part of my Inquiry, as believing it to have been universally acknowledged by all both Jews and Christians, that no other persons were saved in the Ark except *Noah* and his wife, his three sons with their espoused wives; but the Reverend and learned Dr. *Harris* in a work of his not many years ago published * seems to be of another opinion, and names a very learned man as concurring with him, in the same, *viz.* Bishop *Cumberland.* As I have not the book itself, I must take what is said on our present subject, as it is abridged in the *Literary Magazine* for *August* 1735. It is from his second Dissertation on the Hebrew word *Dour* which the LXX translate γενεὰ, and we *generation.*

He observes " that the custom of enrolling man-
" kind was very ancient, as appears from the prac-
" tice of the *Athenians*, who refer the origin of it
" to *Cecrops.* But as mankind were very early di-
" vided into two estates of *freemen* and *slaves*, the
" former only were entered into these Enrolments,
" as being the only persons who had a real interest
" in their country; the *slaves* being placed to their
" masters account, and considered as part of his
" wealth, as any other of his estate or chattels.
" Hence Dr. *Harris* observes by the way, that
" though only eight persons were said to enter into
" *Noah*'s Ark (whereof four only were men and fit

* Observations Critical and Miscellaneous on several remarkable Texts of the Old Testament &c. 4to. Printed in 1735.

" for labour) it may not be impoſſible, that as
" theſe were heads of families, and ſo conſequently
" only named, ſome ſervants might be taken into
" the Ark with them: for ſuch doubtleſs were aſ-
" ſiſtant to *Noah* in the building of the veſſel, who
" by being long engaged with him in that work,
" muſt be informed by him (a preacher of righteouſ-
" neſs) of the judgment which God was bringing
" upon the world; and therefore very likely con-
" curred with him in his faith, and were equally
" objects of Divine Mercy. And therefore it is
" not impoſſible that ſome of theſe might be taken
" into the Ark with him; their hands probably
" being neceſſary for the management of it, dur-
" ing ſo great a ſtorm, and for taking a proper care
" of ſo many living creatures as were preſerved in
" it for ſo long a time, which doubtleſs muſt have
" been a work of great fatigue and labour. This
" will more eaſily account for the ſpeedy peopling
" of the world after the Deluge, and I find, adds
" our author, the very learned Biſhop *Cumberland*
" was of this opinion."

Our author here expreſſes himſelf with great modeſty and according to his known character, and beſides offers ſeemingly good reaſons for his opinion, and yet I think there are ſtronger reaſons againſt it, as will appear on its examination: In ſome things however I muſt concur with him, as namely 1. That the taking a proper care of ſo many living creatures as were preſerved in the Ark for ſo long a time, was doubtleſs a work of great fatigue and labour. And this I have ſhewed at large in the preceding ſection. 2. That though mankind were very early divided into *Freemen* and *Slaves*, the former only were entered into the enrolments, or even named. Thus in *Abraham*'s numerous family none of his ſervants are ever named, but his ſteward or *major domo*, and that upon ſome very remarkable occaſions; nor yet in

Iſaac's

Isaac's nor in *Jacob*'s, nor any other in those early days. 3. That there were slaves or servants in the *Antediluvian* world is very probable, that being one effect or consequence of the violence that so universally prevailed in it. But whether *Noah* made use of such in the construction of the Ark (if any at that time he had) is uncertain, I should rather think that he would not. The world's destruction by water was revealed to himself and for himself only; from the rest of the world it was to be kept secret, and could not be communicated even to his servants, if he had any, because of the danger that would have attended it; and therefore I think he would choose to employ no other hands in the work, but his own and his family's, since had he employed others, it would be thought hard, that they who laboured so much to save others, could not be saved themselves in that *Ark* which was the joint labour of them all.

It is true there were but four men to build the Ark, but they were men of great strength, and doubtless inured to exercise and labour, and there is no comparison between these and men now a days; nay how great a difference is there at present between the strength of labourers and artificers, daily inured to hard labour, and that of men of studious and sedentary lives who seldom use exercise or labour of any kind? Six such persons would not be equivalent to one of the other in any long and laborious work. But besides the four men, there were four women, who could be assisting in many things belonging to the fabrick itself, as also in gathering and storing food of all kinds, and providing the Ark with water sufficient. For more than 1,500 years after the Flood, we find that the women however nobly born, were not brought up to an idle and indolent life, but to useful employments befitting their sex, either in the house or the field, and we may well suppose the

Antediluvian women were inured to like labour; and in the present case they would be obliged to put their hands, not only to such things as they had been before accustomed to, but to every thing else wherein they could be assisting, since it was for their common preservation.

But as to the management of the vessel, during so great a storm, had there been an hundred servants in it, they could have helped nothing, they being all close shut up within, and the Ark having neither sails, nor rudder, nor what else serves for managing ships at sea. *Noah* had done all things that he was commanded, and the Divine Providence would take care of the rest. And though it be true what our learned author says, that none but the names of *free-men* were entered into the publick Enrolments, and though in profane History servants probably would not have been mentioned though they had been taken into the Ark, because by the Civil Law, *servus non est caput*, and so not named; yet we cannot think that *Moses* would upon so solemn an occasion have omitted their names, at least their number, had any servants been taken into the Ark; since in God's account all souls are alike, the greatest and the meanest equally in his favour, if equally righteous.

But there are some passages in Scripture, which I think will absolutely exclude any servants being taken into the Ark. 1. It seems very certain that *Noah* would not go one jot or tittle beyond the command given him, and that expressed no more as to persons than that himself and his wife, his three sons with their espoused wives should go into the Ark. 2. This is confirmed again by *Moses* *. *And the sons of Noah that went forth of the Ark were Shem, Ham and Japhet, these are the three sons of Noah, and*

* Genes. ix. 18, 19.

of them was the whole earth overspread. But *Moses* could not have said with truth that the whole earth was overspread of them, had servants been taken into the Ark, whose offspring would have replenished the earth as well as the sons of *Noah*, and even more had they been more in number. 3. The words of St. *Peter* * are a further confirmation of the same truth. *And if God spared not the old world, but saved Noah the eighth* person, *a preacher of righteousness, bringing in the Flood upon the world of the ungodly.* Where our Translators have supplied the word *person* to shew that the number *eighth*, was not to be referred to the Preacher, but to the persons saved: without that supplement, it is literally, *but saved Noah the eighth, a preacher of righteousness. Nova locutio*, saith *Clerius, cum intelligat octo animas servatas, inter quas esset Noe, qui cum septem secum haberet, ipse erat Octavus*, yet it is a form of speech which has got into some modern languages, as in French *moy huitieme* is, *I and seven more*; but yet more expressly——*Wherein few, that is eight souls were saved by water* †.

But let us now look into the foundation of this opinion. Bishop *Cumberland* and our author seem to have been led into it from the belief of the speedy peopling of the earth after the Deluge. But in truth the earth was not so speedily peopled after the Deluge as those imagine who take it for granted that the reckoning of the years in the present *Hebrew* Copy is the true and original reckoning. In the days of *Abraham* though many countries were peopled, cities were built, kingdoms erected and kings making war yet was the earth but thinly inhabited, as appears by the histories of *Abraham*, *Isaac* and *Jacob*; great part of the lands lying yet in common; those who had collected themselves

* 2 Ep. ch. ii. 5. † 1 Ep. iii. 19.

into cities, claiming no more of the ground than what lay near them and ſerved their own exigencies. Had the number of years between *Abraham* and the Flood, been no more than the *Hebrew* Copy allows, this ſtate of the world in his days had been very wonderful. " But as for thoſe, ſays Sir *Walter* " *Raleigh*, who make *Nimrod* to have arrived at " *Shinaar* in the year 101, and the confuſion to have " been at *Peleg*'s birth, (*according to the years in the* " *Hebrew*) theſe men do all by miracles: they be- " get whole nations without the help of time, and " build *Nimrod*'s tower in the air, and not on thoſe " low and marſhy grounds (which require ſound " foundations) in the plain of *Shinaar* *." But now according to the LXX, the ſpace given between the Flood and *Abraham*'s birth (viz. 1192 years) accounts very well for that improvement of the world in his time. Some of thoſe who would account for the ſo ſpeedy peopling of the world after the Deluge have alledged that thoſe firſt patriarchs might have had children at 14, 16, or 20 years of age. But this would be wonderful indeed that they ſhould begin to procreate ſo early and yet live to above 400, whereas I have proved before that 30 was a great deal too early for them, there being no proportion there between the age of *puberty* and the *term* of life according to the eſtabliſhed law of nature. Father *Lobo* indeed in his Relation of *Abyſſinia*, tells us that the males there marry at ten, and the females younger, and the ſame is ſaid of ſome other hot climates, viz. with reſpect to the females at 10.

This may indeed be poſſible in ſome but could not be the general cuſtom, though it is known that in hot countries, they come ſooner to puberty, than in colder regions. But I wish the ſame Father had told us likewiſe what ſtrength of body ſuch early

* Hiſtory p. 99.

fruits

fruits have, and to what age they live; for as the same judicious Historian observes, "That the hasty "marriages in tender years, wherein nature being "but yet green and growing, we rent from her, "and replant her branches, while herself hath not "yet any root sufficient to maintain her own top, "is one cause why such half ripe seeds, for the most "part, in their growing up wither in the bud, "and wax old even in their infancy *." In the Lead-mines in the mountains of *Hertz* in *Germany*, in which the King of *Great-Britain* as Elector of *Hanover* has a large share, it is said, that the men married there at 12 and 14, lest they should not live to taste the pleasures of matrimony, they being frequently subject to accidents in the mines, but it was observed also, that they did not live to any great age, nor arrive to any great stature, which confirms Sir *Walter Raleigh*'s observation. But these are singular cases and not conformable to the order of nature, which requires maturity before generation.

But had our author given as the ground of his opinion, that he could not see how there could have been servants so early as in *Abraham*'s days, except servants had been likewise preserved in the Ark, it would have looked far more probable; and in truth were we to adhere to the computation of time in the present *Hebrew* Copies it could not easily be accounted for. For after the Flood all men were upon a level, with no other difference than what eldership or seniority gave, all Freemen, and all alike nobly born, being all of them the descendants of *Noah* the father of the new world. How then could so many of them become servants to others in so short a time, except necessity had compelled them to barter their liberty for their maintenance? But this can never be supposed the case so early, since

* P. 66.

the

the earth was large enough to have maintained more thouſands than there were tens at that time in the world; and every father of a family would endeavour to provide for his own; nor could there well be any diſpute or contention about particular places, ſince the younger branches muſt yield to the elder, eſpecially when there was room more than ſufficient for all. It ſeems to me evident therefore, that there could have been no *ſervitude* after the Flood till there had been firſt *wars*. But wars, I think, could never have happened ſo early in the new world as 400 years after the Flood; ſince after the firſt diſperſion of mankind (at what time ſoever it happened, of which we have ſaid ſomething before) the time and care of the ſeveral colonies muſt have been to clear the grounds that they might be fit for culture, to build cities, and make the places of their ſettlements as commodious as they could. Wars then were the original of *ſervitude* in the new world; for as ſome are ſlain in battle, whoſe widows and orphans might by that means be reduced to hard ſhifts, ſo all that were taken captive in fight, or carried captives from a conquered country, would become ſervants to the conquerors; as the people of *Sodom* muſt have been, had they not been reſcued by *Abraham*. All of them, men, women and children had been either kept or ſold for ſlaves. But now this difficulty, as well as ſeveral others, vaniſhes when we reckon the years according to the LXX, for by their computation, *Abraham* was not born till more than eleven hundred years after the Flood. And then indeed when mankind was greatly multiplied, and ambition with other vices began to take poſſeſſion of men's hearts, there might have been wars, as we find there were in his days, though we read of none earlier.

CHAP.

CHAP. II.

Sect. I. *Whether there were any high Hills and Mountains before the Deluge, and of the height of the present?*

THAT there are very high hills and mountains on the present earth, many of which extend themselves several hundred miles in length is well known. But it has been questioned whether such high mountains were originally from the beginning of the Creation, or were some way or other owing to the Deluge.

Dr. *Burnet* in his *Theory of the Earth* will have it, that there were no hills nor mountains on the primitive earth, that is, according to his manner of forming it, but we may safely leave him to Dr. *Keil*'s Examination of his Theory. Nevertheless some others who do not go into his Scheme of the Earth's formation, are yet of opinion that there were no such high hills or mountains from the Creation, as are now upon the earth, but only *Eminences* or *Prominences*, some parts elevated above others; which if it were the truth of the case, it would be much easier to account for an Universal Deluge than upon the contrary supposition, since a far less quantity of water would have sufficed; but as we must not pretend to account for difficulties on precarious suppositions, it will be necessary to consider the arguments on which such opinion is founded. And

1. It is alledged that "*Moses* makes no particu-
"lar mention of the creation of mountains, which
"had they been from the beginning 'tis reasonable
"to think he would have done." True he does not, and for a very good reason, because he could not. For after that the waters which at first covered the

the whole earth were divided into thoſe that were lifted up above the *Expanſe* or Firmament, and thoſe that were left ſtill upon the earth till the third day; when theſe were commanded to retire into their ſeveral receptacles that the *dry land* might appear; the dry land when it appeared or became viſible, appeared with mountains and valleys at once; of which more hereafter. *Moſes* therefore could make no particular mention of the creation of the mountains diſtinct from the reſt of the earth, ſince the earth roſe out of the waters with the mountains on it; and his ſilence in this point is no argument that there were no mountains from the beginning.

2. It is alledged " that when *Moſes*, ſaith *Gen.* " vii. 19. *And the waters prevailed exceedingly upon* " *the earth*; *and all the high hills under the whole* " *Heaven were covered, fifteen cubits did the waters* " *prevail, aud the mountains were covered*, he only " ſpoke here *ad captum vulgi*, that it might be un- " derſtood that the higheſt parts of the earth were " covered 15 cubits." To this I reply, that *Moſes* undoubtedly ſpoke to the common capacity and underſtanding of mankind, but that he as undoubtedly ſpoke truth, and related facts as they really were; and therefore when he ſaith *all the high hills and mountains under the whole Heaven were covered*, we may certainly conclude that there were high hills and mountains to be covered when the Deluge came. For when *Moſes* wrote his Hiſtory, it was well known what was meant by high hills and mountains, ſince they were to be ſeen in ſo many parts of the earth, and had there been no high hills and mountains before the Deluge, but only *Eminences*, or *Elevations*, he had given a falſe Idea of the *Antediluvian* earth.

3. " That this opinion ſeems confirmed by *Ge-* " *neſ.* ii. 5, 6. *The Lord God had not cauſed it to* " *rain upon the earth, but there went up a miſt from* " *the*

" *the earth and watered the whole face of the ground*; " from whence it seems to follow, that had there " been high hills (the laws of nature being sup- " posed the same then as at present) the vapours " so plentifully raised must have condensed and " fallen in drops as they do now." In answer to this, it is sufficient to observe that the want of rain there spoken of, is plainly limited not only to the time before the Fall, but even to the time before the Creation of man, since it immediately follows, *and there was not a man to till the ground.* The design of *Moses* in that place was to shew, that the earth's being furnished with herbs and plants at once in their perfection, was the effect of the Almighty *Fiat*, and not owing to the natural and gradual productions of the earth as afterwards.

4. " That if we understand by the earth's being " watered by a mist that there was no rain before " the Deluge, (as some have been of opinion) it will " be a strong argument against the height of moun- " tains, since had there been such; rain and storms " would have been inconsistent with the perpetual " calmness and serenity of the *Atmosphere*, which " man would have enjoyed in his state of innocence, " for which state the earth was originally formed." We have justly observed that that expression of *Moses* is limited to the time before the formation of man, and cannot be extended to after times.——Rains seem as well necessary before the Flood as after, though not perhaps in such great quantities; since otherwise it is not easy to conceive how the earth could have brought forth her annual productions, and so far from being inconsistent with the calmness and serenity of the *Atmosphere*, that nothing would have been more delightful especially in that warm climate where mankind first lived, than gentle refreshing showers of rain in proper seasons. But whether there were storms and tempests in that

earth

earth as in the present, we can neither positively affirm or deny, though, as man did not long abide in his state of innocence, in all probability there were; being generally owing to natural causes, but yet perhaps not so frequent as now, since the whole surface of waters is far more extended in the present earth than in the former, as we have before given reasons to believe.

5. " That had *Moses* made the mountains the " standard of the height of the waters, he would " have given us the height of the mountains, " but all that *Moses* has expressly said, or given " us the exact standard of is, the height of the " waters above the highest part of the earth." *Moses* I believe never measured the height of the mountains which are of very different heights in different regions of the earth, but having in express words said, *that all the high hills and mountains under the whole Heaven were covered*, it was sufficient to say that the waters rose 15 cubits above them.

6. " That there were high hills and mountains " from the beginning is not apparent from any ab- " solute necessity for them, but only probable from " their use and ornament, since as for rivers, me- " tals and the beauty of the earth, these might have " been answered by *Eminences* only without high " hills——that few animals are so fitted to the " mountains but that they could live upon emi- " nences, besides that the highest mountains are " uninhabited by any living creature whatever----- " and therefore that it is not entirely absurd to sup- " pose that there were no high mountains before " the Deluge." That hills and mountains are necessary to the well being of the present earth is acknowledged by Philosophers, who have shewn the great use of them towards the gathering and condensing of vapours for watering the earth, for the direction of winds, and for the course of rivers,

which without them would be ſuch ſlow runners, that they would be more like ſtagnating waters and unwholeſome, though there may yet be other uſes that we are unacquainted with. Nor was the conſtitution of the earth (though it ſuffered great changes) ſo totally altered by the Deluge, but that what is neceſſary and uſeful now muſt have been in ſome meaſure ſo before.——That metals are generally dug out of hills and mountains, and many curious and uſeful plants found on them which grew not on lower grounds——that animals both birds and beaſts live on high hills, and though the tops of the higheſt be uninhabited by any living creature whatever, as being moſtly covered with ſnow, yet the other and more neceſſary uſes ſtill remain——and that though it be not entirely abſurd to ſuppoſe that there were only eminences and not high hills in the primitive earth, yet is it not well conſiſtent with the reaſon and nature of things *.

But though what has been ſaid, is ſufficient to ſhew the weakneſs of the arguments offered for this opinion, yet it may be ſtill neceſſary to give ſome reaſons for the ſupport of the contrary, ſince if we pretend to account for an Univerſal Deluge, we muſt ſuppoſe that there were high hills and mountains before it, otherwiſe it would give no ſatisfaction to thoſe who from the words of *Moſes* cannot but believe that there were high hills and mountains in the *Antediluvian* world. Now though it be eaſy to conceive that the earth would ſuffer great changes by an Univerſal Deluge, as has been in part ſhewed before, and will more fully appear hereafter, yet I confeſs I am not able to apprehend how any high hills and mountains could be reared up by the Deluge. For

1. Suppoſing that the fountains of the great Deep were broken up by concuſſions of the earth, we

* See *Derham*'s Phyſico-Theology, book 3. ch. 4.

find

find by all the accounts of earthquakes that they will frequently overturn mountains, or remove them from their ſite ſometimes, and throw them on other places near, but not that they ever raiſed up any of a conſiderable height where there were none before. Beſides if thoſe long chains of mountains which are now on the earth were raiſed by earthquakes at the Deluge, what ſhould ſupport them when thus raiſed, or on what *Baſes* could they ſtand? When the ſubterraneous fire (or whatever elſe it was) that lifted them to ſuch a height was ſpent, they muſt neceſſarily fall down again into that great deep or vacuity from which they had been ſo raiſed. But then

2. If the mountains were raiſed by the waters of the Deluge, it muſt either be by the violent incurſion of the waters as their firſt coming on the earth, or by the violent decurſion of the ſame at their drawing off, after they came to their height; but by neither of theſe ways could mountains poſſibly be raiſed. 1. Not at the beginning of the Deluge. Upon the firſt pouring down the heavy rains from Heaven, the waters would run with a rapid current from the higher to the lower grounds, overturn whatever ſtopt their paſſage, and carry huge maſſy ſtones along with them to a conſiderable diſtance, but could never raiſe them to the ſurface of the waters; light bodies would ſwim on the top, but bodies ſpecifically much heavier than water, as huge ſtones could only be hurried along by the force of the waters, but could never be raiſed to the ſurface. At this rate therefore the heavy rains would be more like to waſh down the ſuppoſed eminences and fill up the lower grounds and make all level. But neither would this violent current of the waters from the heavy rains continue long; for as the fountains of the great *deep* were broken up at the ſame time that the rains were poured down, and the waters

from

from thence were with violence thrown upon the earth, these meeting with the other waters, would soon stop their current, and force it back, as the tide of flood coming into a river stops its course and turns its waters upwards. Thus these different waters running from different directions would stop the violence of each other's current, and be soon on a level; and when the waters came to an equal surface on the lower grounds, they would rise gradually to the higher, but would carry no heavy bodies along with them at all, to raise those supposed eminences into mountains. And this gradual rising and increase of the waters we learn from *Moses*, 1. *That the waters increased and bare up the Ark, and it was lift up above the earth.* 2. *That the waters prevailed and were increased greatly upon the earth, and the Ark went upon the face of the waters*, and 3. That *the waters prevailed exceedingly upon the earth, and all the high hills that were under the whole Heaven were covered, fifteen cubits upwards did the waters prevail and the mountains were covered.* The waters then could never rise up mountains by their rising higher and higher upon the earth, since they could never carry heavy bodies along with them, after their first violent current ceased, which would not continue long, the earth itself therefore would remain pretty much in *statu quo*, notwithstanding the increase and gradual rising of the waters, and this is confirmed by what Dr. *Woodward* observes.

3. When the waters were at their height, and an equal surface of waters over all the earth, they would be at a stand, quiet and calm for some time more or less, and then all heavy bodies, stones and rocks would naturally fall to the bottom though they had been carried up by the force of the waters before, and it would be many days ere the higher grounds were discovered; now as the declivity from the higher to the lower grounds increased, so would

the current of the waters be more or leſs rapid in proportion, but how could they poſſibly raiſe any high hills in their deſcent? They might indeed carry down the upper ſurface or *ſtrata* of hills and mountains, and leave the rocks bare, as they have done in a thouſand places, and by that means raiſe ſome little hills and eminences where there were none before, but that was all they could naturally do.

I can think of no ſuppoſeable way that the waters of the Deluge could occaſion ſuch high hills and mountains as there are at preſent on the earth but one, which will ſurely appear very extravagant, *viz.* That the waters on their decurſion running with violence between, or along the ſides of thoſe ſuppoſed eminences, ſhould excavate or ſcoop the earth to the depth of two miles or more, and ſo have made that great inequality of hills and dales now viſible on the earth. But then that prodigious bulk of earth thus ſcooped up by the deſcent of the waters muſt have been at laſt carried into the *alveus* of the ocean, which would be ſo filled with it, that there could be ſmall room left for the reception of the waters, which in that caſe would have recurred on the earth, and endangered another Deluge. Beſides that the earth excavated to that depth had been utterly unfit for vegetation (as the vegetable ſurface of the earth is of no great depth) and the hills and mountains in that caſe had been only fit for vegetation and habitation.

I might farther add that the length of time taken for the waters to overtop the higheſt parts of the earth *viz.* 150 days, and alſo their receſs during 170 more, ſhews plainly that there were high hills and mountains on that earth; for had there been only eminence, or prominences as is ſuppoſed, the tenth part of that time would have ſufficed to cover the earth, and for the waters to retire.

But

But now to put an end to this question, and for ever to silence this opinion for the future it may easily be confuted from the supposition itself, thus. Let us suppose those *Eminences* which they allow to have been only on the primitive earth were a quarter of a mile in height or even half a mile (for if they were higher than that, they were high hills.) The waters rose 15 cubits or 30 feet above these, so that the height of the waters could be no more than 30 feet above half a mile at the highest. How was it possible then that the waters rising no higher than half a mile and a little more should raise up mountains of two miles and an half in height? If they can account for this according to the laws of nature, they may then account for the greatest impossibilities. Upon the whole therefore I conclude, that the high hills and mountains on the present earth were the same before the Deluge, and that they stood fast and firm on their bases notwithstanding the violent incursion or decursion of the waters. These indeed at their running off, might carry away some small depth of earth from their bottoms, suppose 20, 30 or 40 feet, which would make them so much higher, but then they might take off some of the surface from their tops, so that the difference would not be great. But notwithstanding what has been now said, there is reason to think that our highest mountains have received an addition to that height they had before the Deluge, as will be seen presently.

The highest mountains on the present earth that we know of, are either such whose tops are covered with perpetual snow, or have been formerly (as some may be still) *Volcanos.* On the first of these the Snow is never dissolved, but lies and increases from year to year. What a height of increase then must there be during four or five thousand years since the Deluge? Nor can this additional height be judged

of by the eye, ſince ſnow lying for a courſe of years and hardned may change its colour, and become brown or blackiſh. Nor were ſuch mountains, I believe, ever aſcended in order to meaſure the height of the ſnow above their real tops. And that mountains covered with ſnow yearly increaſe ſee an inſtance in *Helvetia* *.

As for the others which have been *Volcanos* it is reaſonable to think that they have alſo received an additional height by the prodigious quantity of matter thrown up from time to time by the ſubterraneous fire. This will appear highly probable from what is ſaid by Mr. *Gordon* in his *Geographical* Grammar, of the Pike of *Teneriffe*. "This Iſle of *Teneriffe*, ſays he, "is famous all the world over for its prodigious "Pike, which appearing to the eye as a large maſs of "many rocks promiſcuouſly heaped up in form of "a rugged Pyramid; it is thought by ſome cu-"rious Naturaliſts to have been raiſed on a ſudden "by a mighty conflagration of much ſubterraneous "ſulphureous matter, whoſe forcible eruption the "very rocks themſelves could not withſtand, but "were thereby piled up in the manner they now "appear. For ſtrengthning of this conjecture, "they alledge the great quantity of ſulphur, with "which this Iſland doth ſtill abound (eſpecially "nigh the foot of the Pike) and the colour of the "rocks themſelves, many of them ſeeming to Spec-"tators as if long burnt in the fire." The ſame author relates, "That in the *Molucca* Iſlands are di-"vers *Volcanos*, particularly that called *Gounon-api* "in *Banda*, which ſome years ago made a dreadful "eruption, not only of fire and ſulphur, but alſo "of ſuch prodigious numbers of ſtones that they "covered a great part of the Iſland, and ſo many

* *Lowthorp*'s Abridgment, vol. 2. p. 465.

" dropt into the sea, that where it was formerly 40 " fathom water is now a dry Beach." Thus have both fire and snow apparently added to the height of the highest mountains above what they had before the Deluge.

Dr. *Woodward* indeed seems to be of a contrary opinion; for he says, " That rocks, mountains and " the other elevations of the earth (especially those " whose surfaces are yearly stirred up by dig- " ging, plowing or the like) suffer a continual *decre-* " *ment*, and grow lower and lower; the superficial " parts of them being by little and little washed " away by rains and borne down upon the adjacent " plains and valleys. That even the stone itself " (whether naked and uncovered as in rocks, or in- " vested with a *stratum* of earth, as is that in our " ordinary hills) is not by its solidity privileged " and secured against them, but is dissolved by de- " grees as well as the looser earth &c."——But though this be true of the lower hills, yet does it not invalidate what I have before said as to the additional height of the highest, because 1. The tops of these are never disturbed by digging or plowing, and so the surface is never loosened. 2. 'Tis seldom or never that rain falls on their tops but snow, which by lying undisturbed and yearly increasing, must considerably add to their height.

I come now to the other subject of this section, *viz.* the real height of the highest mountains on the present earth, which seems necessary to be determined in order to know how high the waters of the Deluge must rise to overtop them.

It would seem at first sight that Sir *Walter Raleigh* thought, that there might be mountains 30 miles high, but upon a closer examination, it will I think appear not to have been his real opinion that there were any mountains of that height or any thing near it; nor could he who had seen so many parts of

the world himſelf, and no doubt more than once the *Pico* of *Teneriffe* (then ſuppoſed the higheſt in the world) ever entertain ſuch an extravagant opinion; but he only makes that ſuppoſition for argument's ſake. The caſe is this. He thought it a piece of folly in any to queſtion, whether there could be waters enough in the bowels of the earth and from the heavens to raiſe the Deluge 15 cubits above the higheſt mountains without the creation of new waters, he therefore endeavours to ſhew, that though there had been hills 30 miles high there was a ſufficient quantity of water to overtop them; but let us hear his own words.

Againſt the ſuppoſition of a new creation of waters to effect the Deluge he argueth thus. " Of this " propoſition whether God hath ſo reſtrained himſelf " or no I will not diſpute, but for the conſequent, " which is, that the world had want of water to " overcover the higheſt mountains I take that con- " ceit to be unlearned and fooliſh; for it is written, " *that the fountains of the great deep were broken up*, " that is, the waters forſook the very bowels of the " earth, and all whatſoever was diſperſed therein " pierced and brake through the face thereof. Then " let us conſider that the earth had above one and " twenty thouſand miles in circumference, the *dia-* " *meter* of the earth according to that circle ſeven " thouſand miles, and then from the ſuperficies to " the center ſome three thouſand and five hundred " miles. Take then the higheſt mountains in the " world, *Caucaſus*, *Taurus*, *Olympus* or *Atlas*, the moun- " tains of *Armenia* or *Scythia*, or that of all other " the higheſt in *Teneriff*, and I do not find, that he " that looketh higheſt, ſtretcheth above 30 miles " upright. It is not then impoſſible, anſwering " reaſon with reaſon, that all thoſe waters mixed " within the earth, 3,500 miles deep, ſhould not " well help to cover the ſpace of 30 miles in height;

" this 30 miles upright, being found in the depths " of the earth 116 times, for the foundations of the " great deep were broken up, and the waters drawn " out of the bowels of the earth.

2. " If we consider what proportion the earth " beareth to the extension of the air over and above " it, we shall find the difference exceeding great. " If then it pleased God to condense, but so much " of this air, as every where compasseth and em- " braceth the earth, (which condensation is a con- " version of air into water, a change familiar in " those elements) it will not seem strange to men " of judgment, yea but of ordinary understanding, " that the earth (God so pleasing) was covered over " with waters without any new creation."——— Hence it would seem that our author speaks only comparatively, intending thereby to shew that there were waters sufficient in the depth of the earth and in the Atmospere to have overflowed the whole earth, though the hills had been 30 miles high without any new creation of waters, not that he believed or thought there was any such height in the hills. And if he believed there were waters enough to have covered them at 30 miles height, how much more, when none of them reacheth 3 miles in height?

But Mr. *Whiston*'s account of the height of the waters will appear yet more extravagant, though it had been *Raleigh*'s real opinion that there were mountains 30 miles high. His proposition is this. " The waters at their utmost height were 15 cubits " above the highest mountains, or about 3 miles " perpendicular above the common surface of those " plains, which adjoined to the Ark, or about 50 " miles higher than the usual height of the com- " mon surface of the earth before *." Now if the

* New Theory, p. 250 and 389. 2d. Ed.

waters rose but 3 miles above the common surface of those plains which adjoined to the Ark, how could they possibly rise 50 miles above the common surface of the earth, or even the level of the ocean, which is still lower? Or can there possibly be so great a declivity as 47 miles from the top of the very highest hills to the level of the ocean in any part of the earth? Dr. *Keil* in his Remarks on this *New Theory* reckons no more than 3 miles perpendicular height from the height of the highest mountains to the level of the ocean, or if *Varenius*'s calculation of the height of the pike of *Teneriff* be exact, 4 miles *, what occasion then have we for waters 50 miles high? I should in truth have thought it an error of the Press of 50 for 5, sufficient and more than sufficient for raising the waters 15 cubits above the highest hills, had he not repeated it a second time, and what is more surprizing even in his second edition after Dr. *Keil*'s Remarks had been long published. Dr. *Burnet* reckons it would take eight oceans to drown the world, if you will not admit the earth to have been formed his way without hills or mountains, but Dr. *Keil* demonstrates that (allowing Dr. *Burnet*'s calculation of the depth of the ocean, and the difference of extent between the seas and the dry land) it would take 23 oceans, and if *Varenius*'s calculation of the height of the *Pico* was right, 28 oceans; but if the waters rose 50 miles above the common surface of the earth, I am afraid 200 oceans would scarce have served. What extravagant *Hypotheses* then are these! which can serve for nothing else but to discredit the truth of the History and render it incredible, just as the *Rabbins* did with the dimensions of the Ark by extending in length the squares of all the sides, and thereby making the length of it 90,000 cubits, the breadth 2,500, and the height 900 cubits.

* Pag. 173 and 175. 2d. Ed.

Dr. *Keile*

Dr. *Keile* saith that *Varenius* in his *General Geography* calculates the height of the *Pico* in *Teneriff* to be one *German* mile or about 4 *English* miles in height, though he is inclined to believe that its height is yet greater than *Varenius* makes it, because he seems to allow too much both for refraction and errors in observation. How that matter may be I know not, but another who measured it much later, does not give it near half that height.

Bp. *Wilkins* justly observes that there is a great difference between those opinions and apprehensions which are occasioned by a more general and confused view of things, and those which proceed from a more distict consideration of them, and so it is as to many vulgar opinions of things built only on superficial views or reports of others. No great credit therefore can be given to the reports of Travellers in this point who judge only by the eye, nor yet to what the ancients have ascribed to the height of some of their famous mountains, for later observations have shewn that they are far wide of the truth. Before the discovery of *America*, the Pike of *Teneriff* was accounted the highest mountain in the world. Of this *Island* and Mountain one of the *Missionaries* gives the following account in a Letter dated *February* 20, 1711.

" In the midst of this Isle rises the famous moun-
" tain called the Pike of *Teneriff*. It may be per-
" ceived (as is said) 50 leagues off. It has the fi-
" gure of a *Cone*, whose *Basis* is very large. What
" is said of its height in some relations, of the cold
" which reigns there, and of the time it would take
" to arrive at its top, is no ways conform to truth.
" I have discoursed with persons who had the cu-
" riosity to ascend it, and I concluded from what
" they told me that the journey may be made in se-
" ven hours. It is true it appears to rise above the
" clouds, snow falls there, whilst in the plains we

were

" were very much incommoded with heat. Altho' " the instruments I made use of to measure its " height, were not very exact, nevertheless I judged " it was no more than 1,300 toises high." Now a *Toise* is 6 feet; 1,300 then multiplied by 6 makes 7,800 feet. Allowing 5,280 feet to a mile, according to this measuring, the Pike wants 120 feet of being a mile and a half high. But because the *Paris* foot is something more than the *English*, viz. $\frac{66}{1000}$ or as others reckon $\frac{68}{1000}$, and because he acknowledges that his instruments were not very exact (though he seems to have taken that into consideration) we may allow the 120 feet on that account and for errors in observation, and suppose the *Pike* a full mile and a half high. But how much does this fall short of its reputed height? Again, near the Town of *Orissava* in the gulf of *Mexico* is the famous mountain of the same name, which they perceived 25 leagues off at sea, and whose top is always covered with snow, although it lies under the Torrid Zone. This mountain the same *Missionary* tells us, is much higher than the Pike of *Teneriff*. Let us give it then 2,640 feet or half a mile more, and that will make it two miles in height; and this is a very great addition, for half a mile added to the height of a mile and a half, will make a mountain appear vastly higher. But if the *Andes* in *Peru* (which are now accounted the highest in the world) are yet higher than this mountain of *Orissava* we shall add a quarter of a mile or 1,320 feet more to their height, they will then be two miles and a quarter high. And this height we give to the mountains is confirmed by what the late learned Professor of Mathematics at *Edinburgh* Mr. *Maclauran* delivered in his Lectures, that there was no mountain in the known world of two miles and a half of perpendicular height from the plain it stood on. But if it be judged reasonable to allow for that additional

ditional height, which our highest mountains have received since the Deluge, either by the snow's lying on them for some thousand years, or by the eruptions in the *Volcanos* throwing up prodigious heaps of stones and other matter, we may suppose the highest mountains in the *Antediluvian* world to have been two miles in height or little more *.

The height of the mountains being thus nearly ascertained, it may not be amiss to enquire why the waters were made to arise 15 cubits above them, when it may be thought sufficient to have destroyed every living creature, had they barely reached the tops of the highest mountains, or even some cubits below them. For this several reasons may be assigned, as 1. The Ark might possibly draw not much less depth of water, being of great bulk and heavy laden with the animals, reservoirs of water &c. in the lower story, and with the large store of provisions in the second: Now as the current of the waters (from which soever quarter it came) would necessarily carry the Ark along with it, when once it floated (*for the Ark went upon the face of the wa-*

* I have somewhere read that one who had measured a very high mountain in *Wales*, computed it to be 3 miles in height. It might possibly be the *Kadar Idris* in *Merionethshire* accounted by much the highest in this Island. If his observations were just, they would overthrow what we have now said of the height of the mountains. But no mountain in this Island, nor in all Europe *besides*, was ever computed equal in height to the Pike in *Teneriff*, and what the height of that is, we have seen. In *Derham*'s Physico-Theology I find that *Snowden* hill in *North-Wales* was measured by Mr. *Caswel* with Mr. *Adam*'s Instruments, and found to be 1,240 yards high, or 3,720 feet: allowing as before 5,280 feet to the mile, *Snowden* hill was short of a mile by 1,560 feet, or was 240 feet more than three quarters of a mile. It is highly improbable then, that any hill in *Wales* should exceed *Snowden* hill by more than two miles. I must suppose therefore that by measuring the foresaid mountain, the person meant no more, than that in ascending from the *Basis* of the mountain to the top, they measured 3 miles, and that might well be, though it had not a mile and a half of perpendicular height.

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ters) it was highly requiſite that the waters ſhould riſe to ſuch a height above the hills, that the Ark in its moving along might not incur the danger of ſtriking upon them, though it ſhould paſs over the very higheſt. 2. The earth was then crouded with men and animals, and the hills not then bare and barren rocks as now, but covered with graſs and vegetables, and as ſeveral animals fed on the mountains, ſo doubtleſs they were inhabited alſo by mankind as well as the lower plains. 3. There were *Giants* in thoſe days, who might be 15 cubits high, (and bodies of a much larger ſize than that have been by credible relation found in *Sicily*.) Now as the waters roſe gradually, and were full five months or 150 days in coming to their height, 'tis natural to think that both men and animals that lived near would fly to the mountains, and as the waters approached them would ſtill climb higher. But as every living creature, ſave thoſe in the Ark, was devoted to deſtruction, it was neceſſary on this account alſo, that the waters ſhould riſe 15 cubits above the higheſt hills, that no animals or men, not even the *Giants* themſelves ſhould eſcape.

SECT. II.

Whether it be not apparent to ſenſe and reaſon that there was a ſufficient quantity of waters to cauſe an Univerſal Deluge and elevate the ſame above the higheſt mountains?

THE height of the mountains thus nearly aſcertained ſhews, that there was no ſuch prodigious quantity of water neceſſary to effect the Deluge, as has been commonly imagined, when the hills were ſuppoſed to be ſome miles higher than they really are: yet a very great height of waters there

there must have been to cover the whole earth at once and to rise 15 cubits above mountains of two miles perpendicular height, which many think incredible.

Were we to embrace the opinion of some, who, to avoid the difficulties with which an Universal Deluge seemed to be incumbered, imagined that the Deluge was *ambulatory*, that is, that the waters first drowned one part of the earth, from whence they rolled round to the others, till the whole earth was drowned, this would greatly abate the quantity of waters. And of this opinion Mr. *Whiston* seems likewise to have been, since he makes the Deluge to have begun in one certain part of the earth, while in all the rest the day was serene and clear. But this opinion cannot possibly stand with reason, because 1. Without a very great miracle the waters could not rise to the height of two miles and more in any one part of the earth, but they would first run off wherever there was a declivity, and diffuse themselves over all, till they came of an equal surface every where before they could rise to the height of one mile any where as I have before shewed in confuting the schemes of a *partial* Deluge. 2. Suppose they had been thus miraculously hemmed in, and walled round as it were, till they had risen above two miles in height to overtop the mountains and drown every living creature in that first part of the world, when that obstacle which kept them up to the height of two miles was removed, the waters would run down with such an impetuous rapid force and velocity as to cause desolation and devastation wherever they came, so as to render the earth a heap of rubbish and confusion uterly unfit for vegetation or habitation afterwards. 3. This method of drowning the earth must have been repeated several times, and every time at the expence of a new miracle; for supposing that part of the earth thus first inundated

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to have been ſo large as one of the four Continents, the waters which covered that, would not ſerve to cover the other three, except they were ſtopt again at proper diſtances, or elſe muſt receive a very great addition of new waters to accompliſh the deſigned end; or if you ſhould ſuppoſe one whole Hemiſphere to have been thus overflowed at once, for example, from the Equator to the North Pole, and when that was effected, the waters to run off again from the Equator to the South Pole, the waters muſt there have been ſtopt again after the former miraculous manner, otherwiſe the firſt Hemiſphere had been twice overflowed. This opinion then of an *ambulatory* Flood is fooliſh, as well as highly derogatory to the Wiſdom and Power of God; we may therefore without heſitation affirm that the Deluge could not be effected after this manner, but that the waters were poured out on all the earth at once; that in a ſhort time they would riſe with an equal ſurface over all, till at the end of the 150 days the whole earth was overflowed and the mountains covered by the waters 15 cubits upwards.

Hence two material points offer themſelves to our conſideration. 1. Whether there could be ſuch a quantity of waters as to cover the whole earth at one and the ſame time, to the height of two miles and above, without the creation of new waters, or bringing them down from ſome or other of the Celeſtial orbs. 2. After what manner ſuch a wonderful Event could be effected.

Great and wonderful Events out of the ordinary courſe of nature, as I obſerved at the beginning, have always been thought incredible or impoſſible, and when men could not conceive by what means they might be brought to paſs, they have always thought it impoſſible for the Almighty to perform them. Thus when the *Iſraelites* murmured for fleſh in the Wilderneſs, and God had ſaid, that he would

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give them flesh to eat not only for one or ten days, but for a whole month, until it came out at their nostrils, and became loathsome unto them, even the faith of *Moses* was staggered, because he could not conceive how it could possibly be; and therefore he answered, *The people among whom I am are* 600,000 footmen (exclusive of women, children and the mixt multitude that came out of *Egypt* with them) *and thou hast said I will give flesh to eat a whole month. Shall the flocks and the herds be slain for them to suffice them? or shall all the fish of the sea be gathered for them to suffice them?* To which he received this reply. *Is the Lord's hand waxed short? Thou shalt see now whether my words shall come to pass unto thee or not.* And they came to pass accordingly. When there was a great famine in *Samaria* by reason of the long siege, so that the women had been compelled to eat their young infants, and the Prophet *Elisha* had told the King, that *to morrow about that time, a measure of fine flour should be sold for a shekel in the gates of Samaria*, a Courtier answered the man of God and said, *If the Lord would make windows in Heaven this thing might be*, and yet that and much more came to pass on the morrow. And thus in the present case, the whole earth covered with waters above the highest mountains, how can this thing be?

But now somewhat to abate our wonder at such an amazing event, it may be expedient to consider the quantity of water that is at present on the earth. Dr. *Burnet* in his Theory supposes the surface of the waters, to be only equal to that of the dry land, but the learned *Scaliger* more justly supposes that the surface of the waters is twice as great as the surface of the dry land, and had he gone even beyond that, he had not exceeded. For let any one take an exact survey of the *Globe* or *Map* of the world and he may perceive that the dry land scarce makes one third part of the *terrestrial* Globe, and that the seas and

oceans

oceans take up other two thirds of the earth's surface, as it is in them represented to us at present, whether with sufficient exactness I shall not contend. But should we take into the account, all that space which the many large *rivers* and vast *lakes*, take up, what is left of the dry land would not make above one fourth of the earth's surface. Nevertheless there may be other lands or islands yet undiscovered, we shall only suppose that the surface of the waters is double to that of the dry land.

Again Dr. *Burnet* supposes the depth of the seas and oceans to be no more than a quarter of a mile in one place with another throughout their whole extent. But in this calculation he must be greatly mistaken; of that depth indeed they may be not far from the shores in many places, but in the oceans which surround the world, the waters are of two or three miles depth as mariners find by their Line and Plummet, nay in many places they cannot sound to the bottom. Now this shews that there are depths in the ocean greater than the heights of the highest mountains.

When the *Psalmist* is setting forth his faith and confidence in God under the greatest imaginable dangers, he doth it in this manner. *Therefore will we not fear though the earth be removed, and the mountains carried into the midst of the sea, though the waters thereof roar and be troubled, though the mountains shake with the swelling thereof* *. Let us for a moment suppose this to be done, that the earth was removed and the mountains carried into the midst of the sea; as the seas and oceans are in proportion of two to one, they could receive the whole and to spare, the oceans in the *American* Hemisphere could alone contain the greater part of the other three Continents, and as the depth of the ocean is greater

* Psal. xlvi. 2, 3.

than

than the height of the highest mountains, the waters would rise above them considerably.

But now instead of this removal of the earth and the mountains into the sea, which never was, nor ever will be done, let us suppose on the contrary that all the water in the seas and oceans was brought upon the earth and the mountains, the effect would be the same, the waters would cover the earth and the mountains to a greater height, than that assigned to the waters of the Deluge. The prodigious number of hills and mountains in the earth would be so far from making a greater quantity of water necessary, that on that very account a far less quantity would serve, than if they had been to rise to the very same height from the level of the ocean without the mountains, since the solid content of the mountains would take up so much space as must otherwise have been occupied by the waters.

We have here only reasoned from the open and visible waters on the earth, but if to these we shall add that vast treasury of waters within the earth, (of which more hereafter) that alone might be sufficient to raise the Deluge to the height mentioned. For though we do not with *Raleigh*, suppose that treasure of waters in the bowels of the earth so great, as if poured upon it, would overtop the mountains, even had they been 30 miles high, because I think it impossible to know how great their quantity may be, yet so far as we may judge from what is known of the subterranean waters, they might drown the earth, and overtop the mountains that were not much above two miles high.

Hence the Reader may perceive that one of the grand objections against an Universal Deluge, *viz.* That it is incredible there should be such a quantity of waters as to raise the Deluge to the height mentioned by *Moses*, is easily answered, since it is evident to sense and reason, that there are within and

upon the earth a greater quantity of waters by far than were neceſſary for that purpoſe. And though thoſe vaſt oceans which now ſurround the Globe ſhould in a great meaſure be the remains of the waters of the Deluge, as we have before given reaſons to believe, and which it might pleaſe God to leave ſtill upon the earth to convince mankind to the end of the world, that there was no want of waters to bring an Univerſal Deluge over it, yet this would not weaken the force of our argument, ſince it is a ſufficient anſwer to the objection, to ſhew that there are actually in and upon the earth more waters than were neceſſary to effect an Univerſal Deluge, and raiſe it to the height mentioned by *Moſes*.

Thus I hope I have fully anſwered our firſt important Querie, *viz.* Whether there could be ſuch a quantity of waters as to cover the whole earth at one and the ſame time to the height of two miles and above? The other was, How ſuch a wonderful event could be effected? But in order to this it will be neceſſary, 1. To conſider the ſeveral ſources of the waters of the Deluge diſtinctly. 2. To take a view of ſome particular Inundations that have happened ſince the Flood of *Noah*, becauſe from thence we may the better comprehend after what manner the Univerſal Deluge was brought about.

SECT. III.

Of the Waters above the Firmament or Heavens.

WE can conceive no other ſources of the waters of the Deluge than theſe two, the rains from heaven, and the waters in and upon the earth. If theſe were not ſufficient for the purpoſe, it will be in vain to bring to their aſſiſtance a new creation of waters, or the Atmoſphere and Tail of a Comet,

which are precarious suppositions and can never be proved. Accordingly the account *Moses* gives is this, *That in the 600th year of Noah's life, in the second month, the 17th day of the month, the same day were all the fountains of the great deep broken up, and the windows of Heaven were opened, and the rain was upon the earth 40 days and 40 nights* *. These were the two sources of the Deluge and there were no other. But what is meant by the *windows* or *floodgates* of Heaven being opened and pouring down their waters upon the earth, has been matter of question, and given occasion to various conjectures.

Some it seems not well understanding, where those waters were placed, which were said to be raised on the second day above the *Firmament* or *Heavens*, have imagined them to have been among the stars. For thus Mr. *C*---- arguing against Mr. *Whiston*'s notion of the Deluge being occasioned by the *Trajection* of a Comet, saith, that it is contrary to the account of the Deluge given by *Moses*, for "that by the windows of Heaven being opened, *Moses* meant the "irruption of those waters he had placed above the "firmament," (*Gen.* i. 7.) and then adds sneeringly, "which waters have never been found there by "any Astronomers whatever." But small wit there is in this jest. For if those waters which *Moses* had placed above the Firmament or Heavens had been poured forth on the earth at the Deluge, how should any Astronomer find them there some thousand years after it. But that we may know what is meant by the *windows* or *floodgates* of Heaven being opened, it will be necessary to look back to the account given of the *second* day's work at the Creation, which is this. *And God said, let there be a firmament in the midst of the waters, and let it divide the waters from the waters: and God made the firma-*

* Gen. vii. 11, 12.

ment, and divided the waters which were under the firmament from the waters which were above the firmament. And it was so. And God called the firmament Heaven, and the evening and the morning were the second day *. Now

1. Before the Light was created on the first day, it is said, *darkness was on the face of the DEEP.* What is meant by the Deep in this first verse, we may learn from the *Psalmist*, who rehearsing the works of Creation and Providence, saith †, *Thou coveredst it* (the earth) *with the Deep as with a garment, the waters stood above the mountains.* The whole earth, mountains and all, was then covered with waters at first, whence St. *Peter* saith § that *the Earth stood out of the water and in the water*; in the water while it was wholly covered with it, and out of the water when the dry land appeared.

2. The Hebrew word *Rachjang* which we translate *firmament*, signifies *Expansion* (as in the margin) or a thing spread abroad and widely extended. Now under the word *firmament*, or that vast expansion which our eyes behold above us, is comprehended the air and all that is to be seen above the earth; *for the fowls fly above the earth in the open firmament of Heaven*; and the sun, moon and stars are *set in the firmament of Heaven to give light unto the earth* ‖.

3. When it is said, *Let there be a firmament* or expanse, *and let it divide the waters from the waters*—— the meaning is, that of the waters of the great deep which wholly covered the earth, part was lifted up into the air, or *Atmosphere*, and spread abroad into thin vapours, or bound up in thick clouds. In reference to which the *Psalmist* saith, *Whatsoever the Lord pleased, that did he in Heaven and in earth, in the sea and in all deep places. He causeth the vapours to ascend from the ends of the earth* ‡. And *Job*, *He*

* Genes. i. 6, &c. † Psal. civ. 6. § Ep. iii. 5.
‖ Genes. i. 16, 17, 20. ‡ Psal. cxxxv. 6, 7.

bindeth

bindeth up the waters in his thick clouds, and the cloud is not rent under them *. Thus the waters which were above in the *Atmosphere* or air (above the lowest region whereof the waters are) were separated from those which remained still upon the earth and covered it.

4. This vast Expanse is called *Heaven. And God called the firmament Heaven.* In Hebrew *Shamajim*, derived from *sham*, there, and *Majim*, waters, because these waters are lifted up from us and above us; and so the waters are said to be *above the Heavens*, meaning those Heavens and that firmament wherein the fowls fly; for above that are the watry clouds. For as every part of the water is called water, whether it be upon or under the earth, whether rivers, lakes or seas; so every part of the *Heaven* or *firmament* is called by the name of the whole. And thus the word HEAVEN is put.

1. For the *Air* or Atmosphere, in which fowls, winds and clouds do fly. Thus where in *Genesis*, they are called *the fowls that fly in the open firmament of Heaven*, in the *Psalms* they are called the *fowls of the Air*. And in *Daniel* the four winds are called *the winds of Heaven*, and the clouds, *the clouds of Heaven* †. And this is the lowest firmament or Heaven, as in *Gen.* i. 20.

2. The word firmament or Heaven is put for the upper firmament, where the sun, moon and stars are placed, as before in *Gen.* i. 16, 17.

3. The word Heaven is put for the high places, where Angels dwell, as in *Matth.* xxii. 30. *but are as the Angels of Heaven* §.

Some think that the LXX translated the Hebrew word *Rachjang*, which signifies *Expanse*, by στερέωμα, as we from them *firmament*, because they took the firmament for a solid thing, wherein the stars were

* Job xxvi. 8. † Dan. vii. 2. § Ainsworth.

fixed; but *Vossius* gives another and better reason for their using this word, *viz.* by firmament they understood the clouds, which bear up and support the vapours and carry them over the earth *, as it is in *Job*, *He bindeth up the waters in his thick clouds, and the cloud is not rent under them.* Mr. *Coetlogon*'s Astronomers then lost their labour, when they looked for the *waters above the Heavens* among the stars, when they were never raised above the clouds. —Thus much to shew from whence the rains from Heaven came, *viz.* from the clouds.

Again what we translate the *Windows* of Heaven, the LXX turn the *Cataracts* of Heaven. Now *Cataract* signifies not only what is commonly understood by it, *viz.* a precipice or stoppage in the channel of a river, from which the water flows down with a rapid and noisy current, as the *Cataracts* of the *Nile*, *Danube* and *Rhine*, but also any other stoppage or hinderance; so that *sluices* and *floodgates* may be termed *Cataracts*, because they stop the course of the waters, till they are opened to give them free passage; and therefore also because windows not only open but shut, the word hath been expounded *windows* for *bars* or *floodgates* (as in the margin) " for as the clouds (saith Sir *W. R.*) re-
" tain the vapours or waters, so when that reten-
" tion is taken from them, the clouds pour forth
" their waters, and the floodgates or windows are
" said to be opened, to give the vapours or waters
" a full and free passage, so as to be poured down

* ——Nempe Interpretes LXX recte vertisse *Rachjang* στερέωμα, i. e. firmamentum aut fulcimentum. Per firmamentum in sacris literis nubes intelligendae sunt, illae namque solae superiores aquas ab inferioribus distinguunt, nec supra nubes ullae aquae concipi possunt. Jam vero firmamenti appellatio ideo recte tribuitur nubibus, quia illae tanquam fulchra, vehicula aut στερέωματα sunt humorum. Attamen cum sol et luna in firmamento esse dicuntur, jam latius accipitur firmamenti vox, nempe pro toto eo spatio quod supra nos est.

" with

" with violence upon the earth. For the opening " the floodgates of Heaven expresses the violence " of the rains and pouring down of the waters, and " whoever (saith he) hath seen those fallings of wa- " ter, which sometimes happen in the *Indies*, which " are called the *Spouts*, where clouds do not break " into drops, but fall with a resistless violence in one " body, may properly use that manner of speech " which *Moses* did, that *the windows or floodgates of* " *Heaven were opened*, that is, the waters fell con- " trary to custom, and that order which we call *na-* " *tural.* God then loosened the power in the up- " permost air, and the waters fell in abundance. " *Behold*, saith *Job* *, *he withholdeth the waters and* " *they dry up* (or rather *all things are dried up, omnia* " *siccantur*) *but when he sendeth them out, they destroy* " *the earth*; and again, *he bindeth the waters in the* " *clouds.* But these bonds God loosed at the time " of the general flood, and also called up the waters " which slept in the great Deep, and these joining " together covered the earth, till they performed " the work of his will †." But though our author here saith that the opening the floodgates of Heaven expresses well the violence of the rains after the manner of the Water-spouts in the *Indies*, yet I do not think the rains fell in that manner. 1. Because in that case the clouds would have poured out all their waters in much less time than 40 days and 40 nights. 2. Because this judgment, though the most terrible ever inflicted on mankind, does not seem to have been so precipitate, though heavy and without intermission, but more leisurely (for God is even slow in his judgments) that he might make man sensible of the hand that smote them, and acknowlege God in their punishment and destruction. The rains from Heaven then were one principal source of the waters of the Deluge.

* Ch. xii. 15. † History, p. 91.

But now *Voſſius*, to invalidate this effect aſcribed to the clouds of Heaven, in his Letter to *Andrew Colvius* affirms, " that it may be proved by certain " and *geometrical* arguments, that although all the " waters ſuſpended in the air and æther were pour- " ed out on the earth, they would not raiſe the ſu- " perficies or height of the waters above a foot and " a half over all the earth," though others ſay 32 feet above the level of the ocean. But *Voſſius*'s arguments in his *partial* ſcheme of the Deluge, and defence of it in the aboveſaid Letter, are all founded on this falſe principle, That God never works but according to the eſtabliſhed Laws of Nature. If this was true, there would be no room for any diſtinction between *ordinary* and *extraordinary*, *natural* and *ſupernatural* (which yet he himſelf ſhall be obliged to allow:) This would eſtabliſh a kind of fate and neceſſity, and in a great meaſure exclude a Divine Providence out of the world, as if God had tied up his hands that he could do nothing out of the ordinary courſe of nature; an *Impotence* we would not aſcribe to the meaneſt artificer, who has ſurely a power over the work of his own hands. The *Pſalmiſt* thought not ſo meanly of God, when he ſaith, *Whatſoever the Lord pleaſed, that did he in Heaven and in Earth, in the ſea and in all deep places.* God worketh according to his own will, and He who gave laws to nature can ſtop or controul thoſe laws when he pleaſes, ſo as to anſwer the ends of his Providence in the government of the *Moral* world. The ordinary laws of nature then can never be made the rule or meaſure of extraordinary caſes. By the law of nature or the method eſtabliſhed by Divine Providence, man's life is ſuſtained by the fruits of the *Earth*; but could not God therefore rain *Manna* from *Heaven* for the ſuſtenance of the *Iſraelites* during 40 years in the Wilderneſs?

But

But now suppose, that God was pleased in this extraordinary case not to suspend or controul the ordinary laws of nature, could not the clouds of Heaven have poured down a much greater quantity of rain at the beginning of the Deluge during 40 days, than at other times falls on the whole earth in a whole year? Is it against the laws of nature that the rains should be withheld from one or more countries for a considerable time or course of years? In the time of *Joseph* it rained not in *Abyssinia* for seven years, which brought a famine on *Egypt*, though commonly the rains there are constant for three or four months in the year and more. At another time it rained not in the kingdom of *Israel* for 3 years and 6 months; and once in the *Eastern* Empire it scarce rained for seven years. We read of a famine throughout all the world, *i. e.* all the *Roman* Empire in the days of *Claudius Cæsar* *, taken notice of by other authors †, most probably for want of rains; at other times again famines have been occasioned by excessive rains which have destroyed the fruits of the earth in this as well as other countries. Nay in the prophet *Amos*, the Lord saith—— § *Also I have withholden the rain from you, when there were yet three months to the Harvest, and I caused it to rain upon one city, and caused it not to rain upon another city, one piece was rained upon, and the piece whereupon it rained not withered, &c.* Now the withholding the rain for several years, or the bringing excessive rains on the earth, the causing it to rain on one city and the keeping it up from others in the same kingdom, are all consistent with the ordinary

* Acts vii. 28.

† *Suetonius* in the life of *Claudius*, saith it happened *ob assiduas sterilitates*, thro' a long barrenness; *Josephus*, that it raged so much in *Judea*, that many people perished for want of victuals; and *Dion Cassius*, that it was a very great famine. The cause of it, the withholding the rains in their season.

§ *Amos* iv. 7, 8.

and eſtabliſhed laws of nature, or elſe it is ridiculous to make the ordinary laws of nature a fixed rule for the Almighty to work by, ſo that he cannot ſuſpend, or controul the laws he himſelf hath given to nature, when, or how or in what manner he pleaſes to bring about the ends of his Providence in the government of the world?

Where is then the abſurdity to ſuppoſe that God, in order to bring ſuch a quantity of rain on the earth, as ſhould be neceſſary to cauſe in part an Univerſal Deluge, ſhould have withholden rain from the earth, or the greater part of it, and ſuſpended the vapours in his thick clouds for one, two or more years before, till the time of the Deluge came? This very probably was the caſe, and the words before cited out of *Job* ſeem plainly to refer to the *Deluge. Behold he withholdeth the waters, and all things are dried up; but when he ſendeth them out they deſtroy the earth* *.

Mr. *Whiſton* ſuppoſes that there was a *ſecond* rain towards the end of the Deluge; but as *Moſes* mentions it not, ſo neither can it be neceſſarily inferred from the words on which he grounds it. *The fountains alſo of the Deep, and the windows of Heaven were ſtopped, and the rain from Heaven was reſtrained* †. For theſe words muſt be underſtood agreeably to what he had ſaid before, that the rain was upon the earth 40 days and 40 nights, and having ſo preciſely marked the time of the rain's continuance, we may well conclude there was no farther rain. The general import of the words is no more than this, that when the clouds had poured forth their waters, the rains ceaſed, and that when the Abyſs below had

* *Job* xii. 15. Here *Junius* in his Notes refers the Reader to the 7th and 8th chapters of *Geneſis*, which contain the relation of the Deluge.

† Geneſ. viii. 2.

poured

poured forth its waters, the fountains of the deep were stopped, not that both these did or could happen at the same time.

SECT. IV.

Of the waters of the great Deep.

WE come next in order to consider the waters of the great Deep, the other and much larger source of the waters of the Deluge, *for all the fountains of the great Deep were broken up* on the day the Deluge began; a fund of waters so immense (for in it we must include the seas) as might have served to overflow the whole earth again, had God so pleased. To shew this we must once more look back to the first Creation of all things.

On the second day after the *Expanse* or wide spread firmament was made, and part of the waters which at first covered the whole earth to a great depth were lifted up into the firmament, there remained still waters upon the earth till the third day, when they were commanded to retire, that the dry land might appear which it had not yet done. Now if after part of the waters were raised up into the *Expanse*, those which remained still on the earth till the third day covered the whole earth, they could have done the same again at the Deluge, had God thought fit to make the whole aggregate ascend.

Vossius indeed would elude this argument, as supposing that the waters left on the surface of the earth, after part of them were lifted up into the firmament, covered only the flat and even surface of the earth before the mountains were formed, which a very small quantity of waters would do; for thus he argues against *Hornius:* "That you may prove "(saith he) that there was no need for a new Cre-"ation of waters to cover the earth at the Deluge, "this

" this is your chief argument, *viz.* that at the first " Creation the whole earth was covered with waters " to a very great height, but you reason very badly " in my opinion. At the first Creation, when all " things settled according to their specific gravity, " and every element kept its natural situation and " place, the earth as the more ponderous, would " necessarily subside below the water. But because " the earth was perfectly spherical, hence it is ma- " nifest, that a small quantity of water would suf- " fice to cover the whole Globe of the earth. Hence " it is also that *Moses* saith that the earth was ἄορα- " τος καὶ ἀκατασκέυαςος as the LXX and *Josephus* " have translated it. It was invisible, because every " where covered with waters: It had not its form " and shape, because the mountains and valleys " were not yet made, which God did not create till " the third day, when he commanded the earth to " ascend and the valleys to subside. Either then " you must assert that all the mountains perished at " the Deluge, which is contrary to the Scriptures " and experience, or you argue very foolishly."

But, with *Vossius*'s good leave, *Hornius* was no such bad reasoner in this case (whatever he might be in others) as is here pretended, and it is he himself that misrepresents the matter of fact, which was performed in the following order. The earth's being invisible and unformed was at first when it was yet in its *Chaotick* state; then 1. On the first day the Light was created. 2. On the second day the waters were divided into those above and those below the firmament. 3. On the third day, the waters under the firmament, which still covered the earth, were commanded to retire, that the dry land might appear. But 4. When the dry land appeared, it appeared with mountains and valleys at once, having received its form and figure under the waters, while the several matters whereof the earth is com-

posed,

posed, and which were mingled with the waters, were reduced into their places, not always according to their specific gravity (which is contrary to manifold experience) but as it pleased God in his Wisdom to order it; for nothing is further said about the formation of the earth, nor does *Moses* make any mention of the creation of the mountains distinct from the rest of the earth. But had the earth upon the subsiding of the waters appeared perfectly spherical, or of an even and flat surface, the creation of the mountains afterwards must have been particularly mentioned. For the mountains are so considerable a part of the earth, such stupendous fabricks and so highly useful to the necessities of the earth, that we have the utmost reason to think that the creation of them in particular would not have been omitted. And though nothing is impossible to the Almighty that does not imply a contradiction, yet it is not easy to conceive how such wonderful fabricks could have been raised, after the dry land appeared, and at its first appearance was perfectly spherical, or of an even surface all over. What is here said by our learned author therefore is only in favour of his Hypothesis or partial scheme of the Deluge; and was it true that when the dry land appeared, the earth was wholly spherical, Dr. *Burnet* would have had a specious reason to say that the *Antediluvian* earth had no mountains.

Now that the mountains were formed before the waters subsided and uncovered the earth (which is the reason that *Moses* could make no particular mention of them) seems evident from the CIV *Psalm*, wherein the Psalmist enumerating the several works of Creation and Providence, saith v. 6. *Thou coveredst it* (the earth) *as with a garment, the waters stood above the mountains, at thy rebuke they fled, at the voice of thy thunder they hasted away, they go up* by *the mountains, they go down* by *the valleys into the place which*

which thou hast founded for them, thou hast set a bound that they may not pass over, that they turn not again to cover the earth. From the tenor of the Psalm it appears that the Psalmist here speaks of the Creation and not of the Deluge, though the matter be true, when predicated of both, but it is not easy to apprehend how, when the waters stood above the mountains, they could upon their subsiding go up by the mountains? But we may observe that the preposition *by* is twice supplied by our Translators, though not in *Italick* as usual, and so is *per* by *Junius* and *Tremellius.* The marginal reading is the literal rendering, and more intelligible with the help of a small parenthesis.——*At thy rebuke they* (the waters) *fled, at the voice of thy thunder they hasted away* (the mountains ascend, the valleys descend) *unto the place which thou hast founded for them.* In like manner *Ainsworth. At thy rebuke they fled, at the voice of thy thunder they hasted away* (*the mountains they went up, the valleys they went down*) *to the place which thou foundedst for them.* And thus *Castalio* renders the words with a parenthesis. *Quam* (*terram*) *cum profundo tanquam veste operuisses, quae super montes stabant aquae, te increpante fugerunt, et ad tui tonitrui sonum, in locum sibi a te destinatum* (*ascendentibus montibus, descendentibusque vallibus*) *praecipitaverunt.* And to the same sense the LXX. Ἄβυσσος ὡς ἱμάτιον τὸ περιβόλαιον αὐτοῦ, ἐπι τῶν ὀρέων ςήσονται ὕδατα. Ἀπὸ ἐπιτιμήσεώς σοῦ φεύξονται, ἀπὸ φωνῆς βροντῆς σοῦ δειλιάσουσιν. (Ἀναβαίνουσιν ὄρη, καὶ καταβαίνουσι πεδία) εἰς τόπον ὃν ἐθεμελίωσας αὐτοῖς. The sense of the passage seems plainly this. That notwithstanding part of the waters were raised up into the firmament on the second day, the earth was still wholly covered with those that remained until the third day (otherwise the dry land would also have appeared on the second.) But that when at God's command they hasted to retire on the third day, as they run off, the

the mountains first and afterwards the valleys appeared; which the *Psalmist* expresses by, the mountains ascended and the valleys descended. Hence it is evident that the mountains were formed before the waters went off, but appeared not till the waters subsided, consequently that the same remaining waters, which covered the earth, and the mountains at the beginning, might, as has been said, have covered them again at the Deluge, had God so pleased. But whereas the *Psalmist* saith, *Thou hast set them a bound that they may not pass over, that they turn not again to cover the earth.* This is to be understood according to the law of nature, which God has established, by which they cannot return again to cover the earth. But the Deluge was an extraordinary case, the work of an Almighty Power, who has all nature at his command, and who could with as much ease call back the waters to cover the earth, as he commanded them at first to retire.

Now that there is a vast collection of waters within the earth (besides the seas which are on the surface of it) which *Moses* calls the *great deep*, is evident from abundance of instances and observations.

1. From the vast number of wells dug in places where there are no springs nor fountains, 20, 30, 40 foot deep or more, where they seldom fail of finding water, though they may sometimes miss by not lighting on those veins or *strata* through which it passes.

2. From the waters found in all mines of Coal, Lead, *&c.* which are drawn off by drains or levels, or raised by engines.

3. From the brooks and rivers that are found to run wholly under ground, as in the salt-mines near *Cracow* in *Poland*, which are 200 fathom deep. Others that for some leagues run above ground, and then run under ground, some of them rising again, but others appearing no more. At *Pen-Park* Hill

in

in *Gloucestershire* in 32 fathoms from the surface, Captain *Sturmy* with a miner came to a river or great water 20 fathoms broad and 8 deep. *Lowthorp*'s Abridgment.

4. From several local inundations caused by the eruption of waters from the earth; of which we shall give some instances in the next section. And

5. By the sudden overflowing of rivers and inundating the neighbouring lands, without any visible cause; or the least rain preceding.

Moreover that the waters of the *great deep* or *Abyss* have by means of certain openings, *Chasms* or *Hiatus*'s in the earth, a communication with rivers, lakes, seas and oceans, by which the waters are reciprocally refunded from each to other, is proved by many notorious instances, some of which likewise prove a subterraneous fire. Of both which *F. Fournier* gives the following instances.

1. In the *Maldive* Islands almost under the *Equator*, in that part of the sea which separates *Malé* and *Poulisdon*, and may be about seven leagues in breadth, the sea appears as black as ink (a sign of its unmeasurable depth) though when taken up in a glass, it differs not in colour from other sea water. It is moreover always seen boiling up in great black bubbles as water upon the fire. And although between the other *Groupes* of Islands the currents are rapid, in this place the sea has no current, which is very frightful to behold. The Natives say that in that place happen frequent tempests.

2. Among those Islands that are in the Bay of *Mexico* close to *Guardaloupe*, and near the Isle of *Goiane*, is to be seen a smoke in the sea, and the waters to boil, and so hot that one cannot hold the hand in it.

3. At the bottom of the *Baltick* in the Dutchy of *Angermania*, a province in *Sweden*, there are very high mountains whose bases are full of deep caverns, into

into which the sea flows and empties itself, and from which likewise it pours forth sometimes with so great a noise and so dreadful, that the shock of this flux and reflux puts often into danger those who approach too near either out of curiosity or by misfortune. However the snows that cover those mountains serve as a guide to mariners to avoid the danger.

4. Not far from *Ireland* is a gulf of waters, to which the waves of the sea from all parts about are gathered, which are there lost and swallowed up as in an Abyss. The same is observed on the coast of *Norway*; (of which we shall take the account from *Gordon*'s Grammar.)

5. The Fleet which the States of *Holland* sent to the *Indies* in the year 1598 reported that on the 15th of *August* sailing towards the *Cape* of *Good-Hope*, they found themselves in a certain place, where for the length of four Musket-shot, and the breadth of 60 or 80 feet, the sea boiled like a Caldron on the fire, but that they sailed over it without inconvenience.

6. We must take moreover the sources of the *great* rivers for so many mouths of this Abyss of waters; as there are an infinite number of waters and rivers that run partly within the earth, partly upon it, then hide themselves, and rise again, and many that never appear at all, which traverse and water all the earth, as the veins do our bodies.

Since then we find (saith he) that there are many rivers that appear not at all, others that appear and then lose themselves, and that we observe upon the earth large openings or mouths, by which vast quantities of waters issue from the *Abyss*, we may with as much appearance of reason say, that the same happens at the bottom of the sea, and that those great boilings which are seen near the *Maldive* Islands, and the *Cape* of *Good-Hope*, issue from some

prodigious ſource of waters in the bowels of the earth. To which I may add another very wonderful, that is to the North of *Porto-Rico* at the *Antilles*, where in the midſt of the ſea there riſes a *ſpout* of water higher than a Pike. It is with reaſon therefore that we aſſert that there are *reſervoirs* and *abyſſes* of water within the earth *.

Purchas giveth us two inſtances in confirmation of this truth. 1. In the year 724, the bottom of the ſea near the coaſts of *Aſia Minor*, burned and ſent forth ſmoke firſt, and after heaps of ſtones, with which the ſhores of *Aſia*, *Leſbos* and *Macedonia* were filled, and a new *Iſland* took beginning of the heaping together of the earth, which was annexed to the Iſland called *Sacra*. 2. At the end of the valley of *Tarapaya* near to *Potoſi* there is a round lake whoſe water is very hot, and yet the country is very cold. They bathe themſelves near the banks, for further it is intolerable. In the midſt is a boiling above 200 feet ſquare. It never increaſeth nor decreaſeth although they have drawn from it a great ſtream for metal mills.

Other like inſtances *Gordon*'s Geographical Grammar will furniſh us with. As 1. Near to *Drontheim* is a remarkable lake, whoſe waters never freeze, even in the dead of winter, notwithſtanding the exceſſive cold at that ſeaſon.

2. Upon the coaſt of *Norway* near the Iſle of *Hitteren* in the Latitude of 68, is that remarkable and dangerous Whirlpool commonly called the *Maelſtroom*, and by navigators the *Navel* of the ſea. Which Whirlpool is in all probability occaſioned by ſome mighty ſubterranean *Hiatus*, and proves fatal to ſhips, that approach too nigh, providing it be in the time of flood; for then the ſea upwards of two leagues round makes ſuch a terrible *vortex*, that the

* *Fournier*'s Hydrography, p. 451.

force

force and indraught of the water, together with the noise and tumbling of the waves upon one another is rather to be admired than expressed. But as in time of flood the water is drawn in by a mighty force, so during the tide of ebb, it does throw out the sea with such a violence, that the heaviest bodies then cast into it cannot sink, but are tossed back again by the impetuous stream, which rusheth out with incredible force; and during that time are abundance of fishes caught by fishermen who watch the opportunity, for being forced up to the surface of the water, they cannot well dive again, so violent is the rising current.

3. Towards the North-west part of *Murray* is the famous *Loch-Ness*, which never freezeth, but retaineth its natural heat even in the extremest cold in winter; and in many places this lake hath been sounded with a line of 500 fathoms, but no bottom found. And nigh to *Loch-Ness* is a large round mountain called *Meal-fuor-vouny*, about two miles *gradatim* from the surface of the *Ness*. Upon the very top of which mountain is a lake of cold fresh water, often sounded with lines of many fathoms, but never could they reach the bottom. This lake having no visible current running either to it or from it, is equally full all seasons of the year, and it never freezeth.

4. South-west of *Swinna* (one of the *Orcades*) are two dreadful Whirlpools in the Sea commonly termed the Wells of *Swinna*, with another between *Ila* and *Jura* (two of the Western Islands;) during the first three hours of flood all of them are very terrible to Passengers, and probably occasioned by some subterranean *Hiatus*.

Now that the seas and oceans communicate with the great Abyss by the means of certain *Hiatus*'s or Chasms is further evident from the following instance. The *Caspian* sea is an inland sea, which has

no visible communication or outlet into any other sea or ocean. Into this sea many large rivers empty themselves. The *Volga* alone is supposed to pour more water into this sea in one year than would suffice to drown the world, and yet the *Caspian* sea remains in the same state, never overflows its banks, nor drowns the adjacent countries. This is a demonstration that the waters poured into the *Caspian* sea from so many rivers are again refunded into the great *Abyss*, through the passages by which it communicates with the great Deep. For the same reason a very large lake in the Island of *Hispaniola* which receives many rivers, and has no visible outlet any where, is called by the *Spaniards* the *Caspian sea*, but by the Natives *Haneygaban*.

Philosophers have been divided in their opinions as to the origin of springs, fountains and rivers; some, and those of great note too, have ascribed them all to the *vapours* raised from the seas, lakes,&c. and falling down again in rains on the mountains and hills, whence springs, fountains and rivers generally take their rise. Others again make them to arise from the sea, by way of Attraction, Percolation or Distillation, through subterraneous passages; and lastly others make the subterraneous waters which pervade the earth to be the origin of most of them. But not one of all these singly is the cause or origin of all springs, fountains and rivers, but rather all of them concur to the forming of springs and rivers, as may be proved from observations. 1. There are *temporary* springs which evidently owe their origin to rains, for when these cease for any considerable time, they are dried up. But then 2. There are also many *perennial* springs which continually flow summer and winter, with or without rains, always the same, having neither decrease nor increase perceivable, except accidentally from violent rains falling therein, or running down from higher

higher grounds into them, and discolouring their waters; but this is but of a short continuance. Now such *perennial* springs owe their origin to the subterraneous waters. 3. Others again, such as are near the sea, or in islands of no great circumference, may be very well supposed to arise from the sea waters. Of which the Isle of *Bourbon* formerly called *Mascarennas* may give a sufficient proof. In this Isle (which is about 80 leagues in circuit) besides the *Volcano*, is the mountain of *Salases* in the midst of the Isle, and higher than all around it. " The violence of " the sea, or whatever cause you will assign for it " (saith a Missionary) raises to the very top of it, " by subterraneous ways, so great a quantity of " water as to form three of the greatest rivers in " the Island. These rivers run down with great " rapidity, and in their course make a prodigious " number of noisy *Cascades*."

What has been said in this Section fully shews that there is an Abyss of waters within the earth, which is partly the origin of springs, fountains and rivers, and which by certain *Hiatus*'s communicates with the open seas and lakes, and was the second great fund of waters that caused the Deluge, and raised it to the height mentioned. We shall next take a view of some particular or *local* Inundations which have happened since the Flood of *Noah*, as by these we shall be the better able to apprehend in some respect after what manner the universal Deluge was effected.

CHAP. III.

Sect. I. *Of ſome particular or partial Inundations ſince the flood of* Noah.

THOUGH after the Flood of *Noah* God was pleaſed to promiſe never to deſtroy the earth again by a Flood of waters, and to enter into covenant with *Noah* and every living creature for that purpoſe, and to give them a token or ſign of that Covenant to aſſure them from their fears of any ſuch judgment to be inflicted on the world, which promiſe he has hitherto kept and will keep to the end; yet did he not by that Promiſe tie up his hands from puniſhing any particular city or country for their wickedneſs, by water, any more than by fire from heaven, or by earthquakes, peſtilence or famine, &c. as by theſe various ways he has deſtroyed many flouriſhing cities and countries for their ſins and abominations ſince the Univerſal Deluge. As there have been therefore ſeveral *local* inundations in divers ages and different parts of the world, atteſted by various authors ſince that time, it may be of uſe in the preſent Enquiry to conſider to what phyſical cauſes they were attributed.

Now ſome of theſe were occaſioned by the ſea's ſurpaſſing its ordinary bounds, ſome by the irruption of waters from the bowels of the earth, others again by the overflowing of rivers, and ſome by the incroach of the ſea and overflowing of rivers jointly.

To begin with thoſe neareſt home, a very large tract of land, once the eſtate of the famous Earl *Goodwin*, was overflowed by the ſea, and is now called *Goodwin-Sands*.

2. The

2. The *Netherlands* have greatly suffered by inundations of the sea, or of that and rivers together; witness the *Zuider Zee*, the *Haerlemer Meer*, and that near the city of *Dort* between *Holland* and *Brabant*, where by a sudden inundation of the sea, and overflowing of the rivers, the *Rhine*, the *Maese* and the *Waal*, no less than 72 villages were drowned, and more than 100,000 souls perished, with all the cattle.

3. St. *Jerome* in the life of *Hilarion* relates that after the death of *Julian* the Emperor, there was an Universal Earthquake, which made the sea overflow its bounds; and as if God had threatened the world with a second Deluge, or that all things were going to return to their primitive *Chaos*, the ships hung upon the tops of the hills, whither the fury of the tempest had driven them.

4. In the Isle of *Tsong-ming* before mentioned, the night before the first day of their sixth moon, in the 35th year of the Emperor *Cang-Hi*, there happened an *Ouragan* or tempestuous wind, by which the sea was so agitated, that it flowed in upon the land, and spread itself for above a league into the island, whereby the whole harvest of the year was lost, the houses overturned, and thousands of men, women and children drowned.

5. Sir *W. Raleigh* mentions some other inundations of the sea, as that in the year 590 in the month of *October*, *Gregory* being Bishop of *Rome*, there happened a marvellous overflowing in *Italy*, especially in the *Venetian* territories, and in *Liguria*, accompanied with a most fearful storm of thunder and lightning; after which followed the great plague at *Rome*, by reason of the many dead serpents cast up and left upon the land after the waters decreased and returned.——— In the year 1238 *Trithemius* speaks of an earthquake which swallowed up many thousands, and after that of a flood in *Friezland*, in

which there perished 100,000 persons *—— Of an inundation in *Italy* in the time of Pope *Damascus*, in which many cities in *Sicily* were also swallowed up.——Another in the Papacy of *Alexander* VI. and another in the year 1515, *Maximilian* being Emperor †.

6. But a more particular relation of a dreadful inundation, first and an earthquake after, that happened in *Peru* on Monday *October* 20th, N. S. *Anno* 1687. is given by *F. Fournier* in his Hydrography §.

Thirty-five leagues to the South of *Lima* is a noted haven called *Pisco*, where several persons of quality reside, who one day perceived that all on a sudden the sea retired a great way, and left the shore dry. Soon after they saw a great swell in the sea, the water to boil and foam, the waves to mount up and tumble one on another with great roaring; and rolling precipitately no more as waves but as mountains of water. The Sea then opened and divided in two, and over-passing its digues and ordinary bounds, poured itself forth on the right and left to the height of two Pikes, advancing a large league into the land, and for 300 leagues along the coast, raging and foaming, overturning trees, houses and towns; the waves by much surpassing their highest walls, and making the whole country desolate for that space. *Camana* a noted town 280 leagues distant from *Lima* perished with its port, as well as many others, especially the town and haven of *Arica*, where the loss was computed at a million of gold. The sea having thus inundated the coast three seve-

* This inundation I suppose is what is now called the *Zuider-Zee* between *Holland* and the remaining part of *Friezland*.

† Anno 1515 tanta fuit in Germania fluviorum inundatio, ut plurimum passim damni darent, & Germania quasi Insulæ formam haberet. *Chron. German.*

§ P. 190.

ral

ral times in a short space, when it retired again it left the country covered with fish of very different kinds and sizes, which would have been some relief to those who fled to the mountains, but on St. *Catharine*'s day (*November* 25) at an hour and a half past noon, the mountain *Ourate*, which for some years before had thrown up a great quantity of cinders, began to shake, and a little after the whole country was seized with such a trembling, and shaken after so violent a manner, that no earthquake was ever thought like it, nay they could scarce think the horror of the Last Day could exceed this; for it extended 300 leagues along the coast, and for 70 leagues up into the land, and in the space of half a quarter of an hour, swallowed up many towns, overturned others, made the highest rocks flie in pieces, stopt the channels of rivers, buried every thing it rencountred in ruins, so that scarce was there a space in all that extent of land that a man could set his foot on. Many of those who were not buried in the ruins were stifled with the dust, which was so thick as to darken the air. A great many *Aqueducts*, which were the wonder of *Peru*, and perhaps the finest in the world in the Province of *Paranicosa* 70 leagues distant from *Lima*, were then overthrown. Although this country was the most populous of all *Peru*, there remained no more than 15 houses standing, and these all shattered and rendered useless. The tears and cries of a city taken by assault were nothing in comparison of what was then heard. Scarce was the Earthquake over, and the dust and smoke dissipated, so as to give those who were alive time to behold the desolation of their country, their delightful valleys filled with the ruins of the mountains, their towns a heap of rubbish, and the bodies of their friends half buried under them, when several rivers whose courses had been stopt, and the channels filled with the rocks, at length

length making way, broke through all obſtacles, and with a roaring noiſe and impetuoſity threw themſelves upon the plains, and filled all with new terror. But this was ſoon abated, the Divine Providence giving theſe rivers a bed and channel whereby to diſcharge themſelves into the ſea *.

Add to this the Earthquake which happened at *Lima October* 28th at half an hour paſt ten at night, *Anno* 1746, and laſted about three minutes; by which 1500 ſouls were loſt, 74 churches, 14 monaſteries and 15 hoſpitals, beſides ſome thouſands of houſes, were buried in the ruins, and the jewels and veſſels of gold and ſilver loſt amounted, it is ſaid, to 300 millions of *Piaſters*. The town of *Callao*, a ſea-port within two leagues of that city, was ſwallowed up by the ſea, and the hurricane was ſo violent, that ſeveral veſſels which rode at anchor were afterwards found on dry land ſeveral leagues up the country. The ſea has filled up the place where the town ſtood, which was the beſt port in *Peru*, and all the inhabitants, between 6 and 7000, periſhed, except about 200 ſailors and fiſhermen, who were thrown upon land with their veſſels †. 'Tis ſomewhat remarkable that as the ſea retired before the ſhock was felt in 1687, ſo before this dreadful earthquake happened at *Lima*, the ſea in like manner retired two miles from the Port of *Callao*; and immediately the City ſunk downright, alſo all that ſpace between the City and *Callao*, ſuffered in the ſame manner; ſo that the ſea which in a moment returned with great violence, now poſſeſſes the place where the City was; and as it is ſaid of one

* In 1687 the ſhock was ſo dreadful, that *Wafer*, who felt it 150 leagues at ſea, affirms, that it frightened the whole ſhip's company, who thought they had ſtruck upon a rock, and were convinced of the contrary only by ſounding. The water was at the time mixed with ſand, tho' no bottom could be found.

† Firſt Letter with Diſpatches to the King of *Spain* from *Vera Cruz*. Gent. Mag. *June* 1747.

City

City once famous, *nunc segetes ubi Troja stetit*; so we may say of this city, *ubi stetit Lima, Callao, nunc naves anchora fundant.*

A large account of that dreadful earthquake and inundation at *Port-Royal* in *Jamaica*, and almost over the whole Island *Anno* 1692 may be seen in *Lowthorp*'s Abridgment of the Philosophical Transactions *, from which I shall extract a few particulars.

It began on *June* 7th between 11 and 12 in the day, with a small trembling, soon followed by a second greater, accompanied with a hollow rumbling noise almost like that of thunder, and upon the heels of this came the third violent shock, which in less than a minute's time shook the very foundation of *Port-Royal* in such sort, that three parts in four of the houses, and the ground whereon they stood, and most part of those who inhabited them, all sunk at once quite under water, the rest of the houses all shook down and shattered. The streets which were next the water, and where their wharfs were, *&c.* lie now in 4, 6 or 8 fathom water——The shake was so violent that it threw people down on their knees, and sometimes on their faces, as they run along the streets to provide for their safety. The ground heaved and swelled like a rolling, swelling sea, by which means some houses left standing were shuffled and moved some yards from their places. In many places the ground would crack and open and shut quick and fast; of which small openings they have observed 2 or 300 at one time, in some whereof many people were swallowed up, some the earth caught by the middle and squeezed to death, the heads of others only appeared above ground, some were swallowed quite down, and cast up again with great quantities of water, others went down and

* Vol. II. p. 411, & seq.

were

were never more ſeen. Other openings that were more large, ſwallowed up great houſes, and out of ſome gapings would iſſue forth whole rivers of water ſpouted up a great height into the air, and ſeemed to threaten a Deluge. All theſe dreadful circumſtances concurring at once, accompanied all the while with prodigious loud noiſes from the mountains occaſioned by their falling, *&c.* and alſo a hollow noiſe under ground, and people running from one place to another with fear looking like ſo many ghoſts, and more reſembling the dead than the living, made the whole ſo terrible, that the people thought the diſſolution of the whole frame of the world was at hand.

Though *Port-Royal* was a great ſufferer by the earthquake, yet it left more houſes ſtanding there than in all the Iſland beſides. It was ſo violent in other places that people could not keep their legs, but were violently thrown on the ground. It ſcarce left a planter's houſe or a ſugar-work ſtanding in all the iſland. And had there been 500 or 5000 towns in *Jamaica*, the earthquake would have ruined every one.——In ſeveral places in the country the earth gaped prodigiouſly. On the North ſide the planters houſes were ſwallowed, houſes, people, trees all up in one gap, inſtead of which appeared for ſome time after a great pool or lake of water covering above 1000 acres, which is ſince dried up, and now is nothing but a looſe ſand or gravel, without any the leaſt mark or ſign left, that there ever had ſtood a tree, houſe or any thing elſe. In *Clarendon* Precinct, the earth gaped, and ſpouted up with a prodigious force great quantities of water into the air above 12 miles from the ſea, and all over the iſland there were abundance of gapings or openings of the earth, many thouſands.—— But in the mountains are ſaid to be the moſt violent ſhakes of all, and the nearer the mountains the greater the ſhake.

shake. Indeed they are strangely torn and rent, so that they seem to be of quite different shapes now from what they were, especially the *Blew* and other highest mountains, which seem to be the greatest sufferers, and which during the first great *shake*, and as long as the great *shakes* continued, which was above two months after the first *shake* (during which time, the shakes came very strong and thick, sometimes two or three in an hour) bellowed out prodigious loud noises and ecchoings. Not far from *Yellows*, part of a mountain having made several leaps or moves, overwhelmed a whole family and a great part of a plantation lying a mile off; and a large high mountain near *Port Morant*, near a day's journey over, is said to be quite swallowed up, and in the place where it stood, there is now a great lake of 4 or 5 leagues over.——In the Blue Mountain and its nigh neighbours, from whence came those dreadful roarings terrible and amazing to all that heard them, may be reasonably supposed to be many strange alterations of the like nature, but those wild desert places being very rarely or never visited by any body, not by Negroes themselves, we are yet ignorant of what happened there. But whereas they used to afford a fine green prospect, now one half part of them at least, seem to be wholly deprived of their natural *verdure*. There one may see where the tops of great mountains have fallen, sweeping down all the trees and every thing in their way, and making a path quite from top to bottom; and other places which seem to be peeled and bare a mile together: which vast pieces of mountains with all the trees thereon falling together in a huddled and confused manner stopped up most of the rivers for about 24 hours, which afterwards having found out new passages, brought down into the sea and this harbour several hundred thousand tun of timber, which would sometimes float in the sea in such prodigious

digious quantities that they looked like moving Iſlands. Some are of opinion that the mountains are ſunk a little, and are not ſo high as they were; and others think the whole Iſland is ſunk by the earthquake.

In this harbour of *Port-Royal*, at the time of the great ſhake, though the ſeas were very calm, was ſuddenly raiſed ſuch a ſtrange emotion in the water; that immediately it ſwelled as in a ſtorm, great large waves appearing on a ſudden, rolling with ſuch a force, that they drove moſt ſhips, if not all in the harbour, from their anchors, breaking their cables in an inſtant; but this was ſoon over, and all was ſmooth again. Two Gentlemen happened to be in *Leguanee* by the ſea ſide, and that at the time of the great ſhake, the ſea retired from the land in ſuch ſort, that for 2 or 300 yards the bottom of the ſea appeared dry, wherein they ſaw lie ſeveral fiſh, ſome whereof one of them ran and took up; and in a minute or two's time the ſea returned again and overflowed a great part of the ſhore. At *Yall* houſe the ſea is ſaid to have retired above a mile. It is thought there were loſt in all parts of the Iſland 2000 people, and had the ſhake happened in the night, very few would have eſcaped alive. But there followed a great mortality after it, which carried off many hundreds.

Upon this dreadful Cataſtrophe Mr. *Gordon* in his *Geographical Grammar* has this remark. "Hurricanes and Earthquakes ſo frequent in the *Caribbees* are ſeldom heard of here, whereupon we may juſtly impute that terrible earthquake *anno* 1695, (it ſhould be 1692) accompanied with as dreadful an inundation rather to a moral than a natural cauſe, *viz.* the many horrid abominations abounding among the inhabitants, which without doubt did loudly call for judgments from Heaven."

But he seems to be mistaken in saying, that earthquakes are seldom felt in *Jamaica*, since there was one there on *Sunday* the 19th of *February* 1687-8, when Sir *Hanse Sloan* was on the place, who says the inhabitants expect an earthquake every year; and that he had seen in the mountains afar off bare spots, which he was told was the effects of earthquakes throwing down part of the hills, which continued bare and steep. That which happened in 1687-8 was felt all over the Island. It damaged the houses, but no persons lost their lives by it. And it was on this account that the *Spaniards* built their houses here very low.

But besides the inundations occasioned by the breaking in of the sea and overflowing of rivers, there are others caused by the irruption of waters from the bowels of the earth.

1. Of these the Lake of *Sodom*, or the *Dead sea*, deserves to be mentioned in the first place, as being the first instance of that kind we know of. For though that and the neighbouring cities were first destroyed by fire from heaven, yet after that conflagration, those plains were inundated by an irruption of waters from beneath, that the land which had been defiled with the unnatural lusts of the inhabitants might be no more inhabited for ever, but remain a lasting monument of the Divine vengeance on such crimes to the end of the world.

2. Another, and for the like reason, was the irruption of waters in the County of *Fermanagh* in the Province of *Ulster*, now called *Loch-Erne*, said to be 30 miles long and 15 broad, of which *Camden* writes thus: "Here is a current report among the people "living hereabouts, that this Lough was formerly "firm ground, well cultivated and full of inhabi-"tants, and that it was suddenly overwhelmed and "turned into a Lake, to extinguish the abominable

crime

" crime of B—ry then among them."---- The *Irish Annals* lay this to the charge of certain *Scotch Refugees*, that were driven from the *Hebrides*, and took up here. But a fuller account of this is in the Note below *.

3. In the Kingdom of *Savady* in *Pegu* there is a great Lake, the original of which was thus accounted for by a Hermit, living near it, to some *Portuguese* in the year 1545. That about 237 years before, there stood in that place a great city, which the King of *Ava* had made war upon and taken. And that in gratitude for this victory, his priests, by whom he was entirely governed, counselled him to sacrifice to *Quiag-Guatur* the God of War, all the male children whom he had taken captives, alledging that in case he did not, those children when they became men would regain the kingdom from him. The King apprehending that danger, caused all the children to be brought together, to the number of 85,000, on a certain day, which was a great festival with them, and most inhumanly put them all to the sword, intending the next day to offer them all a sacrifice by fire. But that very night there happened a great earthquake, and after that such thunderings and lightnings fell upon the City from Heaven, that in less than half an hour it was utterly consumed, and every thing reduced to ashes. That

* Nec non irae divinae index est perpetuus eversio Sodomae et Gomorrhae ubi nunc lacus est, quo in loco ante fuere amaenissima regna et civitates. Eodem modo Ortelius depingens Hiberniam de lacu Erno monet, quod olim fons fuerit, sed ob incolarum nefandam cum bestiis venerem, Deo irato in tantam aquarum diluviem erupisse, ut totum eum tractum culuissimum cum hominibus inundatione submerserit; atque in rei gestae veritatem, hodie sereno tempore etiam nunc Templorum turres sub undis hinc inde conspici. Terram inquit Giraldus tam turpium contra naturam facinorum conscium non tantum primis sed cunctis in posterum habitatoribus indignam Autor naturae judicavit.

Phil. Camerarii Operae Sub. Cent. 1. cap. 18.

thus

thus by the just judgment of God the King of *Ava* himself and every one that belonged to him perished, not one escaping, and amongst the rest 30,000 priests, the authors of this wicked counsel; and the whole territory became a lake, which is called *Orequantur*, i. e. the howlings of the night: For the story goes there were ever after, at every new and full moon, such hideous yellings sent forth from this lake, that the people round were ready to die with fear, insomuch that the whole country was forsaken, there remaining only 85 Hermitages in memory of the 85,000 children, who had been thus massacred by the wicked counsel of the priests.

Ludovicus Georgius, in his map of *China*, describes a large Lake in the Province of *Sanci* made by inundation in the year 1557, wherein were swallowed seven cities, besides towns and villages, and an innumerable multitude of people; one only child in a hollow tree escaping so great a destruction. Such as escaped drowning, as *Boterus* adds, were destroyed by fire from Heaven. But a more particular account of this inundation, by some *Portuguese*, who were at the Port of *Lampaçau* (where the *Portuguese* then had a noble Emporium) at the time it happened, take as follows.

" We had been at the Port of *Lampaçau*, says " the same author, six months and a half, when on " the 17th day of *February* (N.S.) 1556, certain news " came from *Canton*, that on the 3d day of that " month, the Province of *Sanci* had been wholly " drowned in manner following.

" On the first of *February* the earth trembled " from eleven at night to one in the morning, and " the day following from midnight to two o' clock, " as also the day after from one o' clock to three. " During these Earthquakes it was most dreadful " to hear the great noise and hurricane, which the " violent rains and thunders made every where.

" At the ſame time there burſt out of the earth De-
" luges of water, which made ſuch havock and de-
" ſtruction, that the whole country round for 60
" leagues (or 180 miles) was inundated, from which
" of all the living creatures, men and animals, not
" one eſcaped, ſave one child of ſeven years old,
" who was wonderfully preſerved, and ſent to the
" Emperor. The news of this diſaſter no ſooner
" reached *Canton*, than the people were in great
" conſternation, the *Portugueſe* alſo at *Lampaçau*
" were aſtoniſhed at the report, but not believing
" it poſſible, were reſolved to know the truth. Of
" ſixty that we were in our ſhip, fourteen had a
" ſtrong deſire to tranſport themſelves to the place
" to know the certainty, and immediately ſet out.
" At their return they affirmed the fact to be true,
" and certain; of which an atteſtation being made
" and ſigned by the fourteen witneſſes who had
" been on the ſpot, was ſometime after ſent by
" *Francis Toſcano* to *John* III. King of *Portugal*, and
" was given to a prieſt named *Diego Reynel* to deli-
" ver, who could atteſt the ſame by word of mouth,
" he having been an eye witneſs with the other
" fourteen." *N. B.* Thoſe horrid and unnatural crimes for which the inhabitants of *Sodom* and the other cities of the *Plain*, and in the County of *Fermanagh* in *Ireland* were deſtroyed, are by report too common among the *Chineſe*, which might perhaps be the moral cauſe of this inundation.

I have here purpoſely omitted the anciently noted floods of *Ogyges* and *Deucalion*, becauſe I look upon them to be nothing but obſcure and fabulous remains of the Tradition of the Univerſal Deluge. Such our learned Bp. *Stillingfleet* thought them, cenſuring thoſe who had taken a great deal of needleſs pains to place them in their ſeveral ages, and giving the reaſons how they came to be accounted diſtinct and partial floods *.

* Origines Sacræ, p. 401.

SECT.

SECT. II.

After what manner we may conceive the Fountains of the Great Deep broken up.

THE reason of my bringing so many instances of particular Floods, was in order to our more easily comprehending after what manner the waters of the Great Deep were brought upon the earth at the Universal Deluge. For if we may compare small things with great (as in this case there is a great Analogy between them) we may have reason to think that both *that* and *these* were effected in much the same manner. And we may further observe, that most of all the instances I have given of particular inundations, have been occasioned by earthquakes, and that it is highly probable, this was the means God was pleased to make use of in breaking up the fountains of the Great Deep. Not that earthquakes are necessarily the forerunners and bringers on of inundations, since there are several instances of earthquakes that have not been attended with inundations; and besides, those great inundations in *Peru*, preceded the violent shakings of the mountains there by several days, and the effect of the earthquake was the overturning of the mountains without any inundation following; but earthquakes make way for inundations when God pleases so to order it.

Neither in truth ought we to be very positive as to the manner of God's operations in extraordinary cases, (as this surely was, if ever there was any) further than is revealed, because we cannot fathom the ways of the Almighty, which are as *the Great Deep*, and that he is pleased to work variously according to his own will and pleasure, that is, sometimes by

means, and ſometimes without any, by his ſole Word and Will.

Thus at the paſſage of the *Iſraelites* through the Red ſea, *Moſes* was commanded to ſtretch his rod over the ſea, and the *Lord cauſed the ſea to go back by a ſtrong Eaſt wind all that night*, which divided the waters and made a path-way for his people. But when they were to paſs the River *Jordan* under *Joſhua* at the time of harveſt, when that river ſwells and overflows its banks, there were no means uſed to ſtop the waters, but *as ſoon as the feet of the prieſts who bare the Ark, were dipped in the brim of the waters, the waters above were ſtopt, and roſe up on an heap, and thoſe below failed and were cut off*; ſo that the whole multitude paſſed over dry. Again when the whole camp was fed with fleſh for a month, a ſtrong wind brought the *Quails* from the ſea ſhores, but when it rained *Manna* from Heaven daily during their long abode in the Wilderneſs no viſible means of the miracle are mentioned. In like manner when the Lord *Jeſus* twice miraculouſly fed ſome thouſands of people, he made uſe of a few loaves and fiſhes, and in ſupplying the deficiency of wine at the mariage feaſt of *Cana*, he called for water and converted it to excellent wine. But when there aroſe a great tempeſt in the ſea of *Tiberias* while he was aſleep, *inſomuch that the ſhip was covered with the waves*, and the diſciples in great fright awoke him, ſaying, *Lord, ſave us, for we periſh*, he aroſe, and only rebuked the wind and the ſea, and ſuddenly there was a great calm. Well therefore might the men marvel and ſay, *What manner of man is this, that even the winds and the ſea obey him?* From theſe inſtances it appears, that God is pleaſed to operate ſometimes with and ſometimes without means, according to the pleaſure of his Will, and all is alike eaſy to him.

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Nevertheless, as Holy Scripture informs us that there were means used for bringing the waters upon the earth to cause an Universal Deluge, *viz.* the forty days rain from Heaven, and the breaking up the fountains of the Great Deep; so we may conclude that earthquakes were the cause of this upbreaking, and made those apertures of the earth to give way for the waters to issue forth on this solemn occasion, as they have been in many instances since. And this seems also to have been the opinion of the Ancients, delivered down to after-ages by the first *Post-diluvians*, as we may collect from *Ovid*'s description of the Deluge;

Ipse tridente suo terram percussit, at illa
Intremuit, motuque sinus patefecit aquarum.
Lib. 1. l. 284.

Now that there have been earthquakes of a vast extent is attested by several authors. From them Dr. *Woodward* in his Essay affirms, "That there is "sometimes in commotion a portion of the Abyss, "of that vast extent as to shake the earth incum-"bent upon it, for so very large a part of the Globe "together, that the shock is felt the same minute "precisely in countries that are many hundred miles "distant from each other, and this though they "happen to be parted by the sea's lying between "them. Nay there want not instances of such an "universal concussion of the whole Globe, as must "needs imply an agitation of the whole Abyss."

But though there may have been some instances of an Universal Concussion of the whole Globe, yet that concussion was not attended with the like effect as at the Deluge, because God willed it not, having promised never to destroy the earth again after that manner. Neither in order to effect an Universal Deluge does it seem necessary that there should be an Uni-

verſal Concuſſion of the whole Globe; it might be ſufficient for that purpoſe that the concuſſions and the openings of the earth by them, were in very many places both in the land, and in the waters. My reaſons for thus thinking are theſe. 1. Had the concuſſions been univerſal, and the openings all over the Globe of the earth, the waters would have covered the earth in far leſs time than 150 days, during which they were riſing to their intended height. Hence it appears that they aſcended gradually, and therefore that the apertures were not univerſal, but in many places of the earth. 2. Had the concuſſion been thus univerſal, it muſt needs have endangered the Ark itſelf, which being of great length and height, would have received ſuch a violent ſhock, as it could not bear without danger of being broke to pieces. 'Tis true it might have been preſerved even in that caſe from all damage, but then it muſt have been by a miracle, of which there was no need, if the concuſſion was not Univerſal.

Again, though the earth was broke up in very many places, to make way for the waters of the abyſs to aſcend and cover the earth; yet they could never have aſcended to the height mentioned, though they guſhed forth with great violence and mounted to a great height from the apertures of the earth. Their aſcending therefore 15 cubits above the higheſt mountains muſt be aſcribed ſolely to Omnipotency, who has all Nature at his command, and can do whatſoever he pleaſeth in Heaven and in Earth. We can eaſily conceive how waters may deſcend from any given height, for that is natural to them, but we cannot conceive how they ſhould aſcend to ſo great a height as the waters of the Deluge did, againſt their nature. This then muſt be ſupernatural. But as the learned Dr. *Clark* obſerves. * "Natural and Supernatural are nothing at all dif-

* Second Letter to Mr. *Leibnitz*.

"ferent

" ferent with respect to God, but distinctions mere-
" ly in our conceptions of things. To cause the
" sun [or earth] to move regularly, is a thing we
" call natural. To stop its motion for a day, we
" call supernatural; but the one is the effect of no
" greater power than the other, nor is the one with
" respect to God, more or less natural or superna-
" tural than the other." Let this truth then be applied to the waters of the earth. To make the waters when they covered the whole earth, mountains and all, at the Creation, descend into the several receptacles prepared for them, we may call *Natural*, but to make them ascend again to cover the whole earth, mountains and all, at the Deluge, we must call *Supernatural.* But both these were the effect of one and the same Almighty Power, and no greater power was required to the one than the other, nor with respect to God was the one more or less natural or supernatural than the other.

But there is one thing we must here take notice of, *viz.* That though it be very certain that the seas and oceans were brought over the earth at the Deluge, of which they have left manifest tokens in every place on the mountains as well as in the vallies, yet it is observable that the Sacred writer, in his relation of the Deluge, makes no mention of the seas at all; the reason of which appears to be this. All inundations from the sea are occasioned either, 1, and that most commonly, by high winds furiously driving the waves upon the land. But at the beginning of the Deluge, and till after the waters were come to their destined height, there is no mention of any wind, nor could the winds have brought about the end proposed; since in an Universal Deluge they must have blown from all points of the Compass, to bring the sea from every quarter upon the contiguous lands, that is, in quite contrary directions, which would unavoidably obstruct the effect

intended, becauſe that wind which would have brought the ſeas on the land in one part of the world, muſt have drove them further into their beds in another. Or, 2. Inundations from the ſea extraordinary are occaſioned by the irruption of the waters of the Abyſs into the ſea, by new chaſms or openings at the bottom thereof, as in that on the Coaſt of *Peru*, and at *Port-Royal* in *Jamaica*, the firſt without any earthquake, the other occaſioned by it; and ſome other inſtances there are of apertures at the bottom of the ſea, which I have not mentioned. And therefore as the ſea's overflowing the earth in all places was moſt probably owing to the ſudden irruption of the waters of the Abyſs, by new apertures at the bottom of the ſea, *Moſes* makes no mention of the ſeas in particular, but aſcribes the overflowing of all the waters within and upon the earth, to one ſole Cauſe, *viz.* the breaking up the fountains of the Deep, to make way for the waters of the Abyſs to aſcend, *The fountains of the Great Deep were broken up*, which then poured forth its waters into the ſeas and oceans, and made them overflow the earth.

In treating of the ſtructure of the Ark, I ſaid that inſtead of its being moſtly open all along the ſides of the ſecond ſtory, as ſome fancy it was, to give air to the animals whom they place there; it had more need to have been cloſe ſhut up; becauſe the rains from Heaven, and the earthquakes breaking up the fountains of the Deep, were probably accompanied with thunder and lightning. I am the more confirmed in this, by obſerving that Inundations cauſed by earthquakes, have been frequently accompanied with thunder and lightning, as that in the Province of *Sanci* in *China*, and others. Thunder-ſhowers are heavy rains, and, as may be ſeen in that wonderful and ſingular Phænomenon of the *Zuchnitzer* ſea or lake in *Carniola*, though it be ſometimes three weeks

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in filling, yet when it thunders at the time the waters return, it will fill in 24 hours, and even in 18. The thunder protruding the water not only from the hills and caverns round, but from the holes at the bottom, with great force, and to a considerable height *. And therefore as we learn from the *Psalmist*, that God's command to the waters at the Creation to retire into their receptacles, that the dry land might appear, was attended with thunder and lightning to hasten their retreat; so the command to them to return and overflow the earth again at the Deluge, was accompanied with the same loud voice of God, as a means to protrude them more forcibly from the Abyss.

SECT. III.

By what means the waters were drained off the Earth again, after they had come to their destined height.

WHEN the ingenious and learned Dr. *Keile* thought that the drawing off the waters of the Deluge was not at all accountable in any natural way, or by the principles of Natural Philosophy, I may well apprehend it dangerous for me to wade into such deep waters. For in the defence of his Remarks on Mr. *Whiston*'s *New Theory*, having demonstrated that the waters of the Deluge could not possibly be drained off, after the manner he assigned, and that the drying of the earth of such a huge column of waters could only be effected by the Power of God, he concludes thus: "So that although "Mr. *Whiston* has been pleased to ridicule my fond-"ness for miracles, *viz.* those of the Creation and "the Deluge," (the only two he was concerned to vindicate against the two *Theorists*) "yet since all

* *Lowthorp*'s Abridgment. Vol. II. p. 306, &c.

"the

" the natural causes he has assigned, are so vastly " disproportionate to the effects produced, he may " at last perhaps be convinced, that the easiest, " safest, and indeed the only way, is to ascribe them " to miracles." His design in the Examination and Remarks on the two noted Theories was to shew that their principles were wrong, and that they reasoned wrong from their own principles. But had he set himself to account for the increase and decrease of the waters of the Deluge by the true principles of Natural Philosophy, without assuming any fanciful Hypotheses, (the way that others have taken) I make no doubt but that he might have shewn the natural causes of the reduction of the waters far better than I can pretend to do. Nevertheless as that is yet left undone, I must endeavour to do it in the best manner I can.

That there were natural causes of drying the earth again, I collect from the time taken to accomplish it; for had it been done in a miraculous way it might have been performed in far less time than seven months. That this was the measure of time from the height of the waters to the fully draining the earth again, may be easily calculated. The Flood began on the 17th day of the 2d month, and *Noah* came out of the Ark on the 27th day of the 2d month in the year following, which makes one whole year of 365 days (as was proved before) and ten days over. Of these 375 days, the waters began and increased gradually for 150 days, or five months of 30 days each, and then they were at the full height designed, so as to overtop the highest mountains by 15 cubits or 30 feet. All the remaining time of the 375 days the waters were decreasing continually and gradually as they had increased, and the earth drying by degrees. On the 17th day of the 7th month, the Ark rested on the mountains

of

of *Ararat* or *Taurus* *, that is, 47 days after the waters began to decrease, and yet the tops of the mountains were not seen till the first day of the tenth month, which was 120 days after the waters began to fall; so great was the column of waters upon the Globe of the earth, being near three miles of perpendicular height above the level of the seas, insomuch that it required 120 days to exhale or draw off 30 foot of water from that vast depth that covered the earth. Forty days after the tops of the mountains appeared, *Noah* sent forth a raven, which returned not into the Ark, but hovered about, finding probably some carcases or other things for its sustenance, on the mountains, which during these 40 days had raised their tops considerably above the waters. After waiting seven days he sent out the dove the first time, which returned again. After other seven days he sent her out a second time, when she returned with an Olive leaf or twig plucked off the tree; staying other seven days more he sent out the dove the third time, which returnedn ot again. Thus the waters were still abating gradually, and on the first day of the first month of the year ensuing, the waters were no more to be seen upon the land, which was dry to appearance, but too soft and muddy for men or animals to tread upon, neither was there yet any thing upon it for their food. *Noah* was therefore kept in the Ark near two months longer, or 57 days, till the earth by the heat of the

* Mr. *Whiston* is of opinion, that the mountain on which the Ark rested was one of the highest mountains in the world, but it would seem otherwise; for 1. The highest mountains are not in that part of the world where the Ark rested. 2. Before the Ark rested, the waters had been decreasing 47 days, by which time 'tis probable there could not be such a depth of water on the highest mountains as would suffice for the Ark's safe landing, since it might draw not much less than 15 cubits: Yet a high mountain it must have been, since the tops of the mountains did not appear till 73 days after the Ark had rested.

sun

ſun (being in the month of *May*, as will be proved hereafter) had brought forth vegetables for the ſuſtenance of men and animals at their firſt coming out of the Ark. Thus wiſely and wonderfully did God diſpoſe and order all things for the providing thoſe of maintenance whom he had preſerved to repleniſh the world anew. Now though the Power of God was the firſt and ſupreme cauſe of draining the earth of ſuch a prodigious column of waters, under which it lay buried for a year, as well as it was to bring them on to that height, neither of which could ever have been brought to paſs without his Almighty *Fiat*; yet from the length of time taken to dry the earth again, and the continual and gradual, not ſudden decreaſe of the waters, we may reaſonably conclude that there were ſome natural cauſes of draining the earth, as well as of bringing the waters upon it. Theſe are what we are now to enquire into.

In order to this we muſt carefully attend to the words of the Sacred Hiſtorian. Having told us in the cloſe of the 7th chapter, that the waters increaſed and prevailed on the earth, for 150 days, before they came to their deſtined height, he begins the 8th chapter thus: *And God remembered Noah and every living thing, and all the cattle that was with him in the Ark, and God made a wind to paſs over the earth, and the waters aſſwaged. The fountains alſo of the Deep, and the windows of Heaven were ſtopped, and the rain from Heaven was reſtrained, and the waters returned from off the earth continually, and after the end of* 150 *days the waters were abated.* But our Tranſlation of the laſt part of the ſentence is ſomewhat dubiouſly expreſſed, or rather miſrepreſents the meaning of the Sacred writer, which is not, that at the end of the 150 days, the waters were abated, but that then they began to abate; and ſhould have been rendered, *and from the end of the* 150 *days the waters*

waters did abate, or began to abate. Thus *Junius*. *Et transmisit Deus ventum super terram ut sedarentur aquae, occlusis fontibus Abyssi, et cataractis coeli, cohibitoque imbre a coelo; sic recedentibus aquis e superficie terrae, et quidem indesinenter recedentibus defecerunt aquae, exactis centum quinquaginta diebus.* And the LXX. Καὶ ἠλαττονοῦτο τὸ ὕδωρ μετα πεντήκοντα καὶ ἑκατον ἡμέρας.

Let us now observe the regular process of this grand transaction; 1. When the waters were raised 15 cubits above the highest mountains, which took up 150 days, the work was accomplished for which they were sent upon the earth. 2. The two sources of the waters were stopped, the rains from Heaven and the waters of the Abyss, not both at one and the same time, but each at their distinct periods; for the rains were no longer upon the earth than 40 days and nights from the beginning of the Deluge, but the waters of the Abyss continued to issue during the 150 days; so that *Moses* speaks here only in general, after the waters were come to their height, and ceased to flow any more; nor was there any danger of mistaking the sense of his words, when he had said expressly before, that the rains were no longer than 40 natural days upon the earth. 3. God made a wind to pass over the earth for the speedier drying up the waters. 4. *The rain from Heaven was restrained.* This is no tautology, nor does it mean the same thing with *the windows of Heaven being stopped*, for that was done long before, even 110 days before the waters were at their height, but his meaning is, that after the 150 days of the waters ascent, the rains were restrained, that is, God suffered it not to rain upon the earth during the whole seven months that the waters were diminishing continually, and the earth a drying, which was a very material circumstance, highly necessary towards the speedier reduction of the waters, and therefore is expressly noted by the

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Sacred Penman, and muſt be kept all along in mind, to prevent needleſs objections.

Let us next conſider, 1. The quantity of vapours raiſed by the heat of the ſun. Dr. *Halley* obſerves, that the evaporations are leaſt in the winter, and greateſt in the Summer, and moſt of all in windy weather. Mr. *Sedilau* concluded from his obſervations at *Paris*, that what is raiſed in vapours exceeds that which falleth in rain near a half; and Dr *Keile* aſſerts that it is evident by calculation, that the vapours raiſed by the heat of the ſun are alone ſufficient to ſerve all our rivers and fountains with water (this was the Hypotheſis then in vogue, that the origin of all ſprings, fountains and rivers, were the rains only, but this is not true in fact; but be it ſo.) If now the ſun exhales ſuch a prodigious quantity of vapours from the ſeas and waters of the preſent terraqueous Globe, what muſt it have done at the Deluge, when the whole was one immenſe Globe of water, and that during ſeven months, in his courſe between the *Tropics?* And as the greateſt evaporation of the waters would be between the *Tropics*, where the action of the ſun is the greateſt, ſo, as the waters diminiſhed and became of a lower ſurface there, thoſe from the other parts of the world, would be continually and naturally falling down thither for their ſpeedier exhalation, as they ever do, where there is the leaſt declivity; remembring ſtill that God ſuffered it not to rain during all that time upon the earth.

2. If the Evaporations are greateſt of all in windy weather, and, as we find by experience, that there are ſome very drying winds that in a manner lick up the water, here was a *wind* raiſed to facilitate the daily decreaſe of the waters, and which probably continued during the whole time of their receſs. Whether this was an extraordinary wind out of the courſe of nature, or a wind that would naturally

and of course arise by the action of the sun's beams upon the air and that prodigious surface of waters of the whole Globe, together with the earth's diurnal rotation, is needless here to enquire: the expression of *Moses* will suit either case, for all natural causes are ascribed to God as their author; but it is expressly said that a wind was raised, and raised for that end, that it might contribute greatly to diminish the surface of the waters. But

3. Neither was the action of the sun and of the wind upon the waters the only cause of their daily abating and, diminishing, great part of them would return by those cracks and apertures which the earthquakes had made for their issuing forth, and this seems plainly implied by the Hebrew phrase of *their going and returning* (v. 3. in the margin.) Nor is this inconsistent with what was said, v. 2. *That the fountains of the Deep and the windows of Heaven were stopped*, since the obvious meaning of that expression is no more than this, that as after the first forty days it rained no more, but the rain ceased, so after the 150 days, the flux of waters from the abyss was also restrained, so that no more waters were poured forth from thence upon the earth, but not that all the openings were so stopped and closed up that no waters could return by them into the Abyss again. But suppose that expression should mean, that they were closed up again, as no doubt some of them were, yet *Moses* does not say that all of them were, but only in general that the fountains of the Deep were stopped; and though he had said, *All the fountains*, it might nevertheless be thus understood, since it is very well known, that this universal *all*, not only in the sacred but profane writers, and even in common speech, is not to be understood always *absolutely for all and every one* without exception, but *comparatively* for the greater part, or for many. There might be many chasms

or

or openings of the earth, by which as the waters iſſued at firſt, ſo they might return again into the Abyſs.

Now that there might be many ſuch openings left for the waters to return again into the Abyſs is highly probable, becauſe many of them remain to this day.

1. By ſeveral inſtances before given, it is evident that the ſeas communicate with the Abyſs in many places, by the openings that are between them. 2. That ſtrange phænomenon of the *Zuchnitzer* lake in *Carniola* is a proof, that there are holes in the earth by which the waters retire in a ſhort time under the earth and quite diſappear, and that yearly; and other ſuch like inſtances there may be in other countries, though there be no learned men there to obſerve and deſcribe them. 3. Moſt of the openings by which the waters returned into the Abyſs appear to have been upon the mountains, though theſe would ſeem to be the laſt places where to look for them, and which with us are called *Swallows*, as ſerving to ſwallow up the waters of the Deluge; and indeed theſe at the firſt receſs of the waters would ſwallow up vaſt quantities of water, till the waters ſubſided below them, and ſeem highly neceſſary at the beginning to abſorb that vaſt column of waters which roſe 15 cubits above the higheſt hills. Of theſe an ingenious and learned Gentleman, in his viſiting *Croſs-fell* mountain in *Cumberland*, writes thus. * "The *Swallows*, thoſe "inconteſtable remains of *Noah*'s Deluge, begin "here (on *Roderic* heights) to be very frequent. "Some of theſe are 30 or 40 yards in diameter, and "near as much deep, perfectly circular, but con-"tain no water at any ſeaſon, the ground having "gradually fallen in at the ſinking of the waters.

* Gent. Magazine for *Auguſt*, 1747.

" But where they have happened amid rocks, the " holes are left open to incredible depths. This " naturally accounts for those surprizing *phæno-* " *mena* in the *Pyrenean* and *Narbone* mountains, and " our *Elden-hole* in *Derbyshire*, where depths have " never been ascertained with the longest lines." And many more such *Swallows* there may be in many other mountains of the earth still to be seen, had men been as curious to remark them. And why may not that pretty large lake called *Green-castle-lock*, mentioned by the same Gentleman, on the same *Roderic* heights, and many other lakes on the tops of mountains, of which we have mentioned several, which receive no visible feeders and yet are always full, and emit small streams, have been at first also swallows or Absorbers, and which still continue full from the top of the lake down to the Abyss. But neither

4. Is it necessary to suppose that the whole vast mass of waters which covered the earth at the Deluge, was either exhaled in vapours, or descended again by openings in the earth and *Swallow-Holes* in the mountains into the Abyss. I rather suppose that a great part of it was left on the surface of the earth, which partly increased the former seas into those vast oceans which now encompass the Globe, and partly formed those vast lakes that are in several parts of the world, so that the surface of the waters is now greatly disproportionate to the surface of the dry land. Dr. *Keile* indeed says, that there must be a due proportion between the seas and the dry land; but neither he nor any of the Philosophers have told us (neither is it indeed possible for them) what that proportion is or must be, and 'tis probable they may be mistaken in the proportion they suppose. Dr. *Burnet* in his Theory supposed, that the surface of the ocean was equal to the surface of

the dry land, and Dr. *Keile* argues with him on his own ſuppoſition; but an inſpection of the Terreſtrial Globe, or map of the world may convince us, that the ſeas and oceans take up the ſpace of more than two thirds of the earth's ſurface. And if we take in all the lakes, rivers and marſhes (from all which vapours are alſo raiſed) the ſurface of the whole waters is near three parts in four of the ſurface of the preſent earth. But I do not thing it to have been thus in the *Antediluvian* world, and they who argue from the preſent ſtate of things to the ſtate of that world muſt commit many miſtakes, ſince the earth ſuffered great changes by the Deluge, and this great increaſe of the waters upon the preſent earth I take to be one of them. Whether it be that a much greater quantity of vapours or rains are required to render the ſurface of the preſent earth fertile, than was neceſſary for the primitive earth, for a natural reaſon given before; or whether ſuch an increaſe of waters was left as a ſtanding viſible teſtimony of an Univerſal Deluge, and a *Memento Peccati* for mankind to the world's end, as there are ſtanding viſible monuments of the ſame on the dry land in every country of the earth; or for both theſe together, and other reaſons alſo that are unknown to us, I ſhall not determine, but ſo it appears to be in fact. And yet further,

5. I do not think it neceſſary to ſuppoſe that the whole ſurface of the Globe, from Pole to Pole, was dried of its waters before *Noah* left the Ark. The greateſt part of it indeed would, from the ſeveral cauſes here aſſigned, but not towards the Poles. The action of the ſun upon the waters in the winter months would be but ſmall, and far the greater part of the ſeven months in which the earth was a drying, were the winter months in this our *Northern* Hemiſphere, (as will be ſhewn hereafter) in which the Ark

rested. It sufficiently answered all the ends of Providence, if the greatest part of the earth, that especially where *Noah* and the animals were to land and settle, was both dried and afforded sustenance at their first coming out of the Ark: Nor is this at all inconsistent with the account given by *Moses.* His words imply a generality, not an universality. It is said indeed, Chap. viii. v. 9. that the Dove the first time she was sent forth returned, because *the waters were on the face of the whole earth*, there was as yet no part dry where she could set her foot on. After seven days more she returned with an *Olive* leaf pluckt off, *so Noah knew that the waters were abated from off the earth.* Then it follows, v. 13, that *Noah* removing the covering of the Ark, *looked, and behold the face of the ground was dry*; and lastly, v. 14. *And in the 2d month, on the 27th day of the month, was the earth dried.* Now all this may be said with strict propriety, if all that part of the earth was dry where the Ark rested, though the whole might not be so from Pole to pole, which at that time was not necessary. When *Moses* would express an Universal without exception, he does it in very plain terms, viz. * ——*All the high hills that were under the whole Heaven were covered*—— *all flesh died that moved upon the earth*—— *and every man, all in whose nostrils was the breath of life, of all that was in the dry land, died. And every living substance was destroyed, which was upon the face of the ground, both man and cattle, and the creeping things and the fowl of the Heaven; and they were destroyed from the earth, and Noah only remained alive, and they that were with him in the Ark.* Whereas here it is only said, *the face of the ground was dry*, and *the earth was dried.*

* Genes. vii. 19, 21, 22, 23.

Before I put an end to this Section, it may be neceſſary to conſider a paſſage in Dr. *Keile*'s Remarks on Mr. *Whiſton*'s Theory *, which ſeems to deny the return of any of the waters of the Deluge by the cracks and fiſſures of the earth. " It is not " poſſible, ſays he, that this water could deſcend " through the cracks and fiſſures of the earth, which " of neceſſity muſt have been all full at the time of " the Deluge; for water cannot lie on the ſurface " of the earth, 'till all the cracks, holes and fiſſures " in it be filled. This is ſo evidently certain both " to ſenſe and experience, that I think it beyond " all contradiction true, it being as impoſſible to " make water lie on the ſurface of the earth be- " fore all its cracks, pits and holes be filled, as it " is to make a veſſel retain water, whoſe bottom is " bored through with holes. But if I ſhould ſup- " poſe that the cracks and fiſſures remained empty " during the Deluge, (which is indeed an impoſ- " ſible ſuppoſition) yet it is certain that theſe fiſ- " ſures could receive but little more water than " what was at firſt derived from them. For the " Cruſt of the earth, according to Mr. *Whiſton*, ly- " ing immediately on the denſe and heavy Abyſs, " and water being lighter than it, it is abſolutely " impoſſible that ever water ſhould ſettle itſelf be- " tween the Cruſt and the Abyſs. It is therefore " clear, that no more could deſcend through the " cracks and fiſſures of the earth than what they " were able to contain, or what at firſt aſcended " through them to the ſurface of the earth, which " Mr. *Whiſton* ſuppoſes to have been half of the wa- " ters neceſſary for making the Deluge, and muſt " be according to the former calculation at leaſt " eleven oceans of water: though indeed I cannot

* P. 176. 2d. Ed.

" eaſily

" easily understand, how it is possible for them to " contain or receive so much. What then can we " imagine would become of the rest? For after the " channel of the sea was compleatly filled, there " would remain eleven oceans more to be disposed " of, which there is no imaginable place in the earth " able to receive. And therefore it is clear, even to " demonstration, that all this water could never be " removed by natural means."

The Reader may observe that the Author's argument here is *ad hominem* against Mr. *Whiston*'s Hypothesis. 1. That the Abyss was a dense and heavy fluid. 2. That the Crust of the earth lay immediately on the dense and heavy Abyss. 3. That the Cracks and Fissures were empty, and the earth for four miles depth was dry, notwithstanding the waters had issued through it; all which are very unaccountable suppositions: but against the true state of the earth at the Deluge, the Author's argument is of no force. For, 1. The waters of the Abyss are the same as other waters are. 2. Whether the crust of the earth lies immediately on the Abyss, so as to touch its surface, no man can tell; to be sure when the Abyss poured forth its waters, and so far as it emptied itself, there was the same space left to receive them again. 3. The cracks and fissures were doubtless full of water, while the waters of the Abyss flowed through them; and, 4. The surface of the earth itself would be well drenched in water, and all its pits and holes filled with it, while the waters were ascending to their height. But then it will be evident also, that as soon as the waters ceased to be poured forth, and a stop put to their mounting upwards at the end of the 150 days, either because they were all already poured forth, or such a quantity of them as was necessary to raise the Deluge to the height intended; then I say the

waters in the cracks and fiſſures, whether perpendicular or horizontal, would neceſſarily fall down again into the Abyſs, and when theſe cracks and fiſſures emptied themſelves, the waters above would be running into them, and ſo on inceſſantly and continually, the waters would be *going and returning*, as the *Hebrew* expreſſes it. Again, whatever the compaſs or contents of the Abyſs may be, it was ſurely able to receive again all the waters that came out of it, how many oceans ſoever there were; and if at the Creation, after the waters were divided into thoſe *above* and thoſe below the Firmament *, the *inferior* waters ſtill covered the earth, mountains and all, till the third day, yet when commanded to retire, the receptacles God had prepared for them, with the *Alveus* of the ocean, were capable to receive and contain them all, that the dry land might appear, was not the ſame *Alveus*, and former receptacles, capacious enough to contain them all again, when the Deluge ended? I ſhould think then there could be no difficulty to conceive how the waters of the Deluge were diſpoſed of. The heat of the ſun, with the drying wind, would in ſeven months exhale as much in vapours as fell in the 40 days rain from the Heavens; and the Abyſs, with the channels of the ſeas and oceans, receive what had before come out of them; and there were no other ſources of the waters of the Deluge; not to inſiſt on what I have mentioned before, that the vaſt oceans which now ſurround the Globe are a great part of them the remaining waters of the Deluge. The bulk of the Terraqueous Globe is very great, being reckoned above 260 thouſand million of miles ſolid content, its diameter above 7000, and its ambit above 24000. Now how much of this whole content is

* See page 402.

ſolid

solid earth, or the Crust as they call it, which surrounds the Abyss, no man can tell. But suppose there was no such vacuity about the center of the earth as to contain an Abyss of waters, could not the depth of three miles of water above the whole surface of the earth be dispersed and lodged within the contents of 3500 miles, (the earth's semi-diameter) and an Ambit of 24000 miles, though not one drop of it had gone down to this supposed Abyss? And are there not waters within the earth every where almost, and the deeper men dig the more to be found, and rivers of waters under ground? And yet so vast is the concavity in the center of the earth, that Dr. *Halley* supposed there was a Globe of Load-stone or lesser earth, placed in this hollow center of the greater, and that the space between the concave surface of the one, and the convex surface of the other, was filled with a subtle luminous vapour, by which he accounted for both the variations of the Compass, and the *Aurora-borealis.* Though I confess it seems unaccountable to me, how a magnetick globe (of what circumference you please) in the *center* of the earth should affect the needle upon the *surface* of it, at the distance of 3000, or even of 500 miles, or indeed why it should be there at all? This is an Hypothesis which can never be proved, and is I fear like that other, that the physical cause of the Universal Deluge was the approach of a Comet which involved the earth in its watry Atmosphere, which it seems originally belonged also to Dr. *Halley*, and was only deduced into that comfortable length of the New Theory of the Earth by Mr. *Whiston*; the vanity of which *Hypothesis* we shall soon make appear by one plain argument.

I have nothing further to add, with respect to the discharging the waters of the Deluge, than that as the coming on of the waters was probably attended

with thunder and lightning, ſo probably the drawing them off was attended with the ſame, theſe having a mighty influence upon the waters, either to force them up or down, ſo that the words of the Pſalmiſt, *at the voice of thy thunder they haſted away*, may be applied to the waters of the Deluge, as well as thoſe of the Creation.

CHAP. IV.

Sect. I. *At what ſeaſon of the year the Deluge began and ended.*

THOUGH the ſeaſon of the year, when the Deluge began and ended, may ſeem a matter of no great conſequence, yet the time aſſigned by the generality of authors, will, upon due conſideration, appear no way proper, but highly inconvenient in itſelf, and inconſiſtent with that infinite wiſdom which orders and directs all things for the beſt. Let us then examine this point alſo, and ſhew that it is no ways probable that the Deluge begun or ended in the winter ſeaſon, as the common opinion is.

The Sacred Penman gives us the year of *Noah*'s life, the month, and the day of the month when the Deluge began *. *In the 600th year of Noah's life, in the 2d month, the 17th day of the month, the ſame day were all the fountains of the Great Deep broken uo, and the windows of Heaven were opened*——He likewiſe marks the time of *Noah*'s coming out of the Ark. † *And it came to paſs in the 601ſt year of Noah's life, in the firſt month, the firſt day of the month, the waters were dried up from off the earth, and Noah removed the covering of the*

* Geneſ. vii. 11. † Geneſ. viii. 13.

Ark,

Ark, and looked, and behold the face of the ground was dry; and in the second month, on the seven and twentieth day of the month was the earth dried, when *Noah* received a command to go forth of the Ark, and bring all the animals out with him, the earth being now fully dried, and affording sustenance for them. Thus from the beginning of the Flood, to *Noah*'s going out of the Ark, was a compleat year of 365 days (as has been shewed) and ten days over, namely, from the 17th day of the 2d month, to the 27th day of the 2d month in the year following.

Now the question is, which were the first and second months in the *Antediluvian* year, or in what season their year began, whether in *Spring* or *Autumn*; or (which will amount to the same thing) in what season of the year the world was created? The common opinion is, that the world was created in *Autumn*, and that the year began with the *Autumnal Equinox*. If so, then the second month, when the Deluge began on the 17th day thereof, would fall, as is computed, about the 10th of our *November*, and end about the 20th of the same month; though Mr. *Whiston* places its beginning about the 28th of *November*, and its ending about the 8th of *December*, according to the time he had calculated the Comet's approach to the earth.

The chief reason on which this vulgar opinion of the world's being created in *Autumn* is grounded, is this, that the *Israelites*, while they continued in *Egypt*, began the year in *Autumn*, till it was changed by *Moses* upon their coming out of that country. But this reason is not sufficient to support the conclusion. We are not certain that the *Israelites* reckoned thus before they came into *Egypt*, nay, we may rather I think be certain that they did not. *Abraham* came out of *Chaldea*, where they reckoned the beginning of the year not from the *Autumnal*, but from the

the *Vernal* Equinox, or the ſun's entering into the ſign *Aries*. But his Deſcendants, while in *Egypt*, were obliged to conform in this point to the *Egyptian* cuſtom, and begin the year with the *Autumnal* Equinox, becauſe the *Egyptians* did. And theſe might begin the year in *Autumn*, for a reaſon peculiar to their country, whoſe fertility is owing to the inundation of the river *Nile*, as the *Abyſſinians* begin their year with *September*. But if we are to bring an argument to prove the ſeaſon of the year in which the world was created, from the cuſtom of nations, why not rather from the *Aſiaticks* than the *Africans?* From thoſe countries which lay neareſt to the plains of *Shinaar*, where the Diſperſion began, and were therefore firſt peopled? Theſe all in *Chaldea*, *Perſia*, and the *Mogul*'s country, in *China*, &c. begin their year from the *Vernal* Equinox, and not from the *Autumnal*, which is a much better reaſon to conclude, that the *Antediluvian* year began alſo with the *Vernal* Equinox, and conſequently that the world began in the ſpring ſeaſon; whence it will follow, that the Deluge neither began nor ended in the winter; but that the ſecond month in which it began and ended, was the ſecond month from the *Vernal* Equinox. Now,

1. The Deluge, I think, could not well begin in the winter months; not that there are leſs rains in the winter than in the ſummer, rather ordinarily far more, but for another reaſon. If we caſt an eye on the *Terreſtrial* Globe, or map of the world, we may perceive, that far the greateſt part of the *Terra firma*, or habitable earth, ſo far as is yet known to us, lies *North* of the *Æquator*. In the months of *November* and *December*, in which they would place the beginning and ending of the Deluge, the ſun verges towards the Tropick of *Capricorn*, and the winter Solſtice is in the laſt of them. At that ſea-

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son of the year therefore, a great part of the Northern Hemisphere would be subject to frost and snow, and when the rains and the waters of the Abyss were poured forth, they would be turned to ice. How could they then rise to any great height, so as to cover the highest mountains? Or how could the Ark move on Ice, or waters mingled with Ice, and perhaps mountains of Ice? But now, if the Deluge began on the 17th day of the 2d month after the *Vernal* Equinox, this inconvenience would be avoided, the greater part of the Northern Hemisphere would be free from snow and ice, and the sun's heat, with the rains, *&c.* would, during the 150 days or five summer months, dissolve the rest. But in the countries lying between the Tropicks and to the South of them, they seldom see snow or ice, and their winters are heavy rains. Highly probable it is then, that the Deluge happened when the far greater part of the earth was free from snow and ice, so that there was nothing to impede the course of the waters, or the motion of the Ark, and that was the Summer season and not the Winter.

2. But if the Deluge could not apparently begin in the winter, much more inconvenient would it have been to have ended in the winter. By the mountains of *Ararat*, on which the Ark rested, I understand, with St. *Jerome*, the mountains of *Taurus*, overlooking the plains of *Ararat*, as the most probable opinion. Now these mountains are beyond the *Tropick* of *Cancer*, and near 40 degrees of North Latitude. In that part of the world they have sharp winters, though not of so long continuance as with us, and the high mountains are covered with snow in that season. Had the Deluge then ended, and *Noah* come out of the Ark in their winter months, pray what food or sustenance would there have been for man or beast at that time of the year?

year? All the fruits of the earth had been deſtroyed by the Flood, and the earth could produce nothing again till the ſpring. To have ordered them out of the Ark therefore at the beginning of winter, had been the ready way to expoſe them all to periſh for want of food. But the wiſdom of God, *who knoweth the times and the ſeaſons*, and has all in his own power, would ſurely ſo order the whole, as to bring thoſe men and animals, whom he had ſo carefully preſerved, out of the Ark at that ſeaſon of the year which was moſt convenient, *viz.* then, when the earth could afford them maintenance at their firſt forth-coming. But,

3. Had the Deluge ended in the winter, this Northern Hemiſphere could never have been drained of that vaſt column of waters that lay upon it at that ſeaſon of the year, the whole ſurface of which, on the contrary, would have been frozen and thick ice. We have no need here to have recourſe to a miracle, as ſome have ſuppoſed, *viz.* That the earth was dried by the ſupernatural power of God; but from the length of the time, no leſs than ſeven months, may very well conclude that it was done by natural means; by the heat of the ſun, with the aſſiſtance of the wind raiſed, and the other means mentioned in the preceding ſection. And this was the reaſon of *Noah*'s abiding ſtill in the Ark near two months after the face of the ground was dry, till the earth had brought forth vegetables for their ſuſtenance.

Now had Authors conſidered the unavoidable inconvenience that muſt have attended the Deluge ending in the winter, or but conſulted common ſenſe and reaſon, that beſt of all Critics, (as a late ingenious author calls it) they could not ſo readily have embraced the opinion that the Deluge began and ended in the winter. There was but a right and a

wrong

wrong season in the case, and they have chosen the latter.

But though it be the common opinion that the world was created in *Autumn*, and consequently that the Deluge began and ended in the 2d month after the *Autumnal* Equinox; yet is it not so general, but that several learned men, both ancient and modern, have been of contrary sentiments. Amongst these last are the learned *John Gerard Vossius* (the father of our *Isaac*) and the inquisitive Dr. *Woodward*. The first of these, in his *Isagoge Chronologica*, answers the arguments which the others bring for the world's being created in *Autumn*, after this manner.

" There are two arguments, says he, brought " to prove that the world began in *Autumn*, one " from the state of Nature, the other from Scrip- " ture. That from Nature is, that the trees, as " soon as they were brought forth by the earth at " God's command, had ripe fruits fit to be eaten, " not only by animals, but by *Adam* and *Eve*; " whence they infer, that the world must have been " created in *Autumn*, when all the fruits were ripe." To this he replies. " All that can be concluded " from this argument from nature is no more than " this, that when *Adam* and *Eve* were formed and " placed in Paradise, there were fruits for them to " eat; but it will not necessarily follow that these " were *Autumnal* fruits. Some fruits are ripe in " the Spring, some in Summer, and others in Au- " tumn. In hot and well watered grounds, such " as that where Paradise was situated, the fruits are " early ripe. Now as God was pleased to create " fruit-trees for the different seasons of the year, it " is not to be supposed that all those trees bore fruit " at one and the same time, contrary to their seve- " ral natures. This would have been confusion in " the natural world, rather than order, that the

" Spring

" Spring and Summer fruits ſhould have been ripe " in Autumn, a thing which would never happen " again, and a miracle without neceſſity." All that this argument neceſſarily infers, is, that the world was not made in the Winter, but concludes no more for Autumn than the Summer or the Spring, ſince there are fruits proper to each of theſe ſeaſons. If the world was created in the Spring, there were ſome fruits proper to that ſeaſon, if in the Summer there were Summer fruits, if in the Autumn there were Autumnal ones; but trees of different kinds, and made for different ſeaſons, could not all bear fruit at once, without inverting and confounding the order of nature.

2. The other argument from Scripture is this. " The *Iſraelites*, they ſay, began the year with *Au-* " *tumn*; for in *Exodus* xxiii. 16. they were com- " manded to keep the feaſt of Tabernacles in the " end of the year, when they had gathered in " their labours out of the field. And in chap. " xxxiv. 22. the ſame feaſt of gathering is at the " year's end, or at the return of the year. Hence it " is evident, ſay they, that the end of the year and " the return of the year are placed in *Autumn*, but " that *Moſes* changed this cuſtom; for he appointed " that the month *Abib*, afterwards called *Niſan*, " ſhould be the firſt month of the year to them, " and not the ſeventh, as it was counted before, " becauſe in that month the Lord brought them " forth out of *Egypt*. But that *Moſes* did not alto- " gether abrogate the ancient manner of reckoning " the year, but only appointed that in ſacred things, " they ſhould begin the year with the month *Abib* " or *Niſan*, but that in contracts for land and civil " affairs, the month *Tiſri*, which falls in *September*, " was accounted the firſt month in the year." Of which opinion was alſo *Joſephus*. Lib. 1. c. 4.

To

To this argument our learned author answers, 1. That it is true the *Israelites* before the time of *Moses*, and their egression from *Egypt*, did reckon the beginning of the year from the *Autumnal* Equinox; but it will not necessarily follow that this was their ancient custom derived from their ancestors, since it might very well be, that by their long abode in *Egypt*, they would be obliged to begin their year and months as the *Egyptians* did. 2. It is a mistake to think, that the change of the beginning of the year by *Moses* respected only *Ecclesiastical* affairs, since it is evident from many instances, that all *Civil* and *Historical* matters were reckoned after the same manner. But, 3. That in some cases only, the former custom they had observed in *Egypt* of beginning the year from the *Autumnal* Equinox, was still retained as most convenient, namely, in the *sabbatical* years and years of *Jubile*, and for contracts about land. Thus in the *sabbatical* years they were forbid to sow or reap. In the beginning of the seventh year, the seed-time fell in the month *Tisri*, or *September*, and the end of harvest in the end of the same year, in the month *Hillul.* But if the *Sabbatical* year had been to begin in the month *Nisan*, or at the *Vernal Equinox*, the prohibition would have reached to the eighth year as well as the seventh; and the Command would be neither to sow in *Tisri* in the seventh year, nor reap in *Hillul* in the eighth: but *Moses* speaks of the seed-time and harvest in one and the same year.—— Again, in the *Sabbatical* and *Jubile* years, every man was to return into his own possession, which he had sold or mortgaged. The most convenient time therefore for him to return was at seed-time, otherwise he could have reaped no profit from his land for a twelvemonth, and that was, as I said, in *Tisri* or *September*, the beginning of the year, before it

it was changed by *Moses*. Likewise in all contracts for land or money, the most proper time for payment was, when all the harvest was got in, which was at the end of the year, according to their reckoning while in *Egypt*. In these cases, and for these reasons, they reckoned the beginning of the year as formerly; but in all *sacred* and *civil* matters, the beginning of the year was reckoned from the month *Abib* or *Nisan*, which was the first month of the year after their return from *Egypt*.

Thus therefore we conclude, that a *double* manner of beginning the year may be observed in Scripture, but *one* only of the months. Not but that from the double beginning of the year the *Hebrews* might reckon the months first, second and third, after a two-fold manner also, [that is, beginning from *Nisan* or *Tisri*] but that the Sacred Writers never speak after this manner: nor can it with any shew of reason be affirmed, that this way of speaking was commonly used under either *Moses*, *Joshua*, the *Judges*, or even the *Kings*, to the time of the *Babylonish* Captivity.

To these arguments of our Author we may add this farther observation. That the Command first given for celebrating the three grand Festivals, was within a few months after their coming out of *Egypt*, when they had not begun to reckon the beginning of their year from the month *Abib*, till the return of that month a year after their Egression. And therefore in the first Command for these festivals, *the end of the year* and *the return of the year* are mentioned. But in the Book of *Deuteronomy*, wrote by *Moses* before his death, when they had been now near 40 years in the Wilderness, and where the same command about the three festivals is repeated in ch. xvi, those expressions, *at the end of the year*, and *the return of the year* are omitted, they having then begun the year

year with the month *Abib*, as they were commanded.

2. Though the only reason given by *Moses* for changing the beginning of the year to the month *Abib*, is because in that month God brought them out of *Egypt*; yet the design of Providence in bringing them out in that month, might be to oblige them to quit that manner of reckoning they had taken up in *Egypt*, and reduce them to the ancient form; the more to separate them in their ceremonies and customs from the *Egyptians*, (as was done in several other instances) especially if some of their idolatrous ceremonies and feasts were governed by the beginning and succeeding months of their year. But it will no more follow, from the *Egyptians* beginning the year in *Autumn*, that the world was created in that season, than it will follow from the *Romans* beginning the year in *January*, and all the *European* nations since continuing that custom, that the world was created in Winter, which none ever yet asserted.

In confirmation of this, our Author further observes, that the number of the months, and so the beginning of the year, are always reckoned from the sun's entering into *Aries*. Thus also the Poets reckoned the beginning of the year, as appears by *Virgil*'s second Book of Georgics. Thus also the Astronomers, who always begin the signs in the *Zodiac* from *Aries*. Thus also the Historians, as *Diodorus Siculus* in his second Book. Thus also many Jews, as *Rabbi Joshua*; and thus many of the Fathers, as well as some Moderns.

He then proceeds to give the two reasons which induced him to believe, that the Deluge began and also ended in the Spring. The first: That the world being destroyed by the Deluge, it is more credible that the animals would be sent forth to re-

new it at that time which by nature is most fit for generation. But that season is rather in the Spring, succeeded by the Summer, than in the end of Autumn, with the Winter after it, according to the common observation in *Pervigilio Veneris.*

Vere concordant Amores, vere nubunt alites.

The second is what I have before largely insisted on, *viz.* That if the animals had been sent forth of the Ark in the end of Autumn, they could have no food during all the Winter: But in the Spring season, while *Noah* continued in the Ark almost two months after the recess of the waters, the earth had brought forth as much as was sufficient for them at their first out-coming, and presently in the month following would furnish all things more plentifully; but so much would the earth produce in the Summer, that in the Autumn they would be able to lay up abundance of provisions against the Winter for the use both of men and animals.

Now what is thus clear from reason, is further confirmed from observation on the vegetable and animal remains of the *Antediluvian* world. Dr. *Woodward*, from the *Vegetable* remains of that first world, after which he was a diligent searcher, proves, that the Deluge began in the end of the Spring, or beginning of Summer. His words are these. "And "there is so great an uniformity and general con- "sent among them, that from it I was able to dis- "cover, what time of the year it was that the De- "luge began *. The whole tenor of these bodies

* Genes. vii. 11. "*In the second month, the 17th day of* "*the month, were all the fountains of the Great Deep broken up,* "*and the windows of Heaven were opened. Moses,* writing to "the *Jews* his Countrymen, makes use of the form of the year "then received amongst them, which was indeed the first and "most ancient, but had been disused during the time of their abode "in *Egypt*, and but newly re-established when this was wrote.

"thus

" thus preserved clearly pointing forth the month " of *May*. Nor have I ever met with so much as " one single Plant or other body, amongst all those " vast multitudes which I have carefully viewed, " that is peculiar to any other season of the year; " or any thing that falls out earlier or later, any of " them short, or any of them further advanced in " growth, seed, or the like, than they now usually " are in that month, which assuredly never could " have happened, had there really been such an " equality of seasons, and temperature of heat as " is imagined by the Theorist (Dr. *Burnet.*) There " are some phænomena of the animal remains of " that earth, which afford us more arguments to " the same purpose, and those not less concluding " than the other."

To this demonstrative proof, Mr. *Whiston* (with whose Theory it did not at all agree, that the Deluge should begin in *May*) gives a very slight answer, *viz.* " That it is always Summer in one part " of the world or other." Very true; but the month of *May* is not Winter in any part of this Northern Hemisphere. Besides, Dr. *Woodward* observes, " That the Terrestrial parts of the Globe, " though dissolved and assumed up into the water, " did not slit or move far, but at the general sub- " sidence, settled down again, in or near the same " place, from which before they were taken up.---- " That had the seeds of the Pepper-plant, the Nut-

" *Exod.*xii. 2. In this, *Nisan*, or, as it was also called, *Abib*, was the " first month, as *Ijar* the second, upon the 17th day whereof the " waters of the Deluge came forth, according to this relation. " And truly that time (which is not a little remarkable) falls " within the compass here chalked out by nature so very punc- " tually, that one can scarcely forbear concluding, that these " strokes and lines of nature, and those of that relation, come " both from the same hand."

"meg, the Clove or Cinnamon trees been born "from *Java*, *Banda*, the *Molucca*'s and *Ceylon*, to "these Northern Countries, they must all have "starved for want of sun. Or had the seeds of our "colder Plants shifted thither, they would have "been burnt up and spoiled by it; but things ge-"nerally kept to their proper places, to their old "natural soil and climate, which had they not "done, all would have been confounded and de-"stroyed *."

But to conclude this argument, let it be observed, 1. That neither the days of the week, nor the months of the year had any names at the beginning, nor perhaps till long after the Dispersion; but both were named according to the order of their succession, first, second, third, *&c.*

2. That the months and years would necessarily be reckoned from the Creation; the years of *Adam* and the years of the world running parallel, as both commencing together; any given year and month of *Adam*'s life, being the same year and month of the world.

3. That the first, second, seventh and tenth months, in the relation of the Deluge, must be according to their natural succession in time, as they had been reckoned from the beginning; I mean, that at whatever time of the year the world was created (from which the first month, and so on, would be accounted) at the same time of the year

* This observation of Dr. *Woodward* confirms what I said in the section of the *Mountains*, viz. That tho' at the first descent of the rains, and irruption of the waters from the Abyss, the current of the waters must needs be with a great torrent; yet after a short time, when the waters had diffused themselves, and covered the plain surface of the ground to the height of some feet, they would then rise gently and gradually, without any violent current, till they covered the tops of the mountains, which took up no less than 150 days.

again

again would fall in their order, the first, second and other months in the year of the Deluge. But now,

4. It is evident to reason, as has been shewn, that the Deluge could not possibly end in the winter months, nor *Noah* with the animals leave the Ark at that season of the year, because of the manifest inconvenience that would have attended it; consequently neither could the Deluge begin in the Winter. Therefore the second month in which it both began and ended, could not be the second month from the *Autumnal*, but the second month from the *Vernal* Equinox; therefore also the world began in the *Spring*, and not in *Autumn*, which were the points to be proved.

Hence then I form an incontestable argument against Mr. *Whiston*'s Theory, that the Deluge was occasioned by the near approach of a *Comet*, into whose Atmosphere and Tail the earth was involved. For without enquiring whether a *Comet* really approached so near the earth at the precise time he mentions, which Dr. *Keile* in his Remarks acknowledges might be, (though not so certain neither as to a precise day and hour, since calculations for so many thousand years backwards of the Orbit of Comets may be liable to mistakes) nor yet if a *Comet* did approach the earth at that time, whether it could have such an effect as he ascribes to it, which the said author denies; it is evident that the Deluge could never be owing to such a cause, for this plain reason, that the Deluge did not happen in the month of *November*, (to the 28th day of which Mr. *Whiston* fixes it) but in the month of *May*, above six months before. But if he is mistaken in the month of the year, he is much more so in the year itself, which falls 600 years short of the true year of the Deluge.

But before we pass from this subject it may be necessary to obviate an objection that may readily occur against fixing the Deluge to the second month after the *Vernal* Equinox, or indeed to any certain month of the year, which is this: "That we are "not certain that the *Antediluvians* had any *intercalary* days or months at proper distances in their "year, or might not be mistaken in them. In either of these cases the second month, in a long "tract of time, might pass through all the seasons "of the year, which was the case of the *Roman* Calendar, till rectified by *Julius Cæsar*." To this I answer, 1. That this objection lies equally strong against those who fix the Deluge to the second month after the *Autumnal* Equinox. It is as much incumbent on them to remove this objection as on me, since otherwise they can be no ways certain that the Deluge happened at the time they assign for it. But I desire the Reader would observe the difference between the grounds of the two opinions. That the Deluge began in the second month after the *Autumnal* Equinox, is founded only on the precarious supposition that the world was created in *Autumn*, and that again supported by this weak reason, that the *Israelites*, when in *Egypt*, began the year from the *Autumnal* Equinox. But such arguments prove nothing certain, and have been fully answered. On the contrary, that the second month of the year is to be reckoned from the *Vernal* Equinox, is proved not only by reason, but by facts or observations. I answer,

2. That though we have no *Antediluvian* Calendar to inform us whether they had any *Leap*-years or *intercalary* days in that first world, yet we may reasonably conclude that they had some method or other to regulate their years, and observe the proper times of the seasons. It is written, *Genes.* i. 14.

And

And God said, let there be Lights in the Firmament of Heaven to divide the day from the night; and let them be for signs and for seasons, and for days and for years. By them men were to regulate their days and years, and seasons, or set times of Summer and Winter, Spring and Autumn, which come by the course of the Sun, Moon, and Stars or Constellations. It is highly probable then, that God would have instructed *Adam* in this, as well as other necessary things, if he could not find out this use by his own observation; but

2. Supposing they had no such Divine Revelation, as to the uses they were to make of the Heavenly Luminaries, yet I think it may be taken for granted, that men who lived to the age of 8 and 900 years, and who for a long tract of time had no great variety of matters to take up their thoughts, would employ a good part of their time in making such observations from the heavenly bodies as were of so great use and importance to them. "*It is God,* "saith *Job, who maketh Arcturus, Orion, and Pliades, and the Chambers of the South,* (Heb. *Ash,* "*Cosil, Cimah,* and *Mazaroth.*) Now of these, "*Arcturus* riseth in *September,* and beginneth *Autumn*; *Orion* riseth in *December,* and beginneth "Winter; the *Pleiades* arise in the Spring, and denote "that season; and the Chambers of the South, "that is, the Southern Stars, which are for the "most part hidden from us, as in chambers, do "yet some of them arise to us in Summer, as the "*Dog-star,* &c. *"

3. Besides those observations from the sun, moon and stars, which men of so great longevity could not but make in a course of years, the earth itself in her annual productions, and according to the different climates, would observe her several seasons,

* *Ainsworth.*

whether men made any Celeſtial Obſervations or not. The Vegetable World, plants, flowers and trees would ſhew the ſeveral ſeaſons of Spring, Summer, Autumn and Winter *.

In my opinion therefore 'tis a miſtake, to think that the *Antediluvians* could not regulate their months or years, or that their firſt and ſecond months might in a courſe of years paſs through all the ſeveral ſeaſons. For though they might not have attained to that exact ſkill in *Aſtronomy*, which the Moderns have done in theſe later ages by the help of Glaſſes, and with all the obſervations of the Ancients before them; yet might they be able to make ſuch obſervations, as to keep their months and years, times and ſeaſons in due order, as well as we do now, though we are ignorant of the rules they had formed in this important matter.

There is another thing alſo here to be taken notice of. Dr. *Woodward*'s Obſervations on the Vegetable remains of the *Antediluvian* world, point out the month of *May* for the time of the Deluge; but if the *Vernal* Equinox falls about the 10th of *March*, when the ſun enters into the ſign *Aries*, from which we date the *Æra* of the World, the 17th day of the 2d month reaches only to the end of *April*, and not into *May*. There are two ways to account for this.

1. 'Tis found by Aſtronomical obſervations, that the Equinoctial points go backward every year 50 ſeconds, but by Sir *Iſaac Newton*'s Calculations, according to his Principles, they recede 58 ſeconds, or near a minute in a year, and in 60 years near an hour. Again, Dr. *Wallis* ſaith, that moſt certain it is, that at our *Saviour*'s Birth the *Vernal* Equinox was not on the 21ſt of *March*, N. S. as the *Gregorian* Account would make it, but nearer the 25th,

* See here *Winder*'s Hiſtory of Religious Knowledge, p. 70 and 71.

or

or our 15th. Hence it appears, that the farther we reckon backwards, the later the Equinox fell; so that in the year of the Deluge, some thousand years ago, the *Vernal* Equinox might fall on the 20th or 25th of *March*, O. S. and this would bring the 17th day of the 2d month, to the 7th or 12th of *May*. Or

2. It may be thus accounted for. The greater fertility of the *Antediluvian* earth might make the vegetables as forward in the end of *April*, as they are with us now about Mid-*May*.

I promised in the preceding section to shew, that the greater part of the seven months in which the earth was drying, were the Winter months in this our Northern Hemisphere. The ascent of the waters was during five whole months. If the Deluge began on the 7th or 12th of *May*, this brings the time of their ascent to the 7th or 12th of *October*. In the seven remaining months of the earth's drying, were the Winter months of *November*, *December*, *January* and *February*.

SECT. II.

Whether Noah *entered into the Ark previously to the first day of the Deluge.*

HAD not a modern Author asserted, that *Noah* did not enter into the Ark till the very day the Deluge began, I should have thought it very needless to have made this question any part of my Inquiry, since it clearly appears from Scripture, that the entrance into the Ark was several days before the Deluge began, and reason will shew us that this was highly necessary.

The words of *Moses* are these *. *And the Lord said unto Noah, come thou and all thy house into the Ark,*

* Genes. ch. vii. 1, &c.

for

for thee have I ſeen righteous before me in this generation.——For yet ſeven days, and I will cauſe it to rain upon the Earth 40 *days and* 40 *nights, and every living ſubſtance that I have made will I deſtroy from off the face of the earth: And Noah did according to all that the Lord commanded him.——And Noah went in and his ſons, and his wife, and his ſons wives with him—— And it came to paſs after ſeven days* (or on the ſeventh day) *that the waters of the Flood were upon the earth.*

Now to what end was this notice of the preciſe day the Flood was to begin, or the command to enter before-hand given; but that all things might be duly ordered and finiſhed before the fatal day of the world's deſtruction came? And is it not expreſsly ſaid, that *Noah* went in as he was commanded, and after ſeven days the waters of the Flood were upon the earth? And indeed what ſhould hinder him from immediately obeying the Divine Command? Did *Noah* diſtruſt the word of the Almighty, or was he unwilling to enter the Ark till he ſaw the rains deſcend? His faith had been very weak, and his obedience very tardy, and loſt much of their merit, had he delayed his entering into the Ark till the very day the Flood began; and yet it was by *faith* that he prepared the Ark for his ſafety, and by *faith* he and his houſe were ſaved. Divine Commands were not wont to be obeyed with ſuch reluctancy by the faithful, but immediately put in execution. *Abraham* no ſooner received the command to offer up his ſon, than, even on that trying occaſion, he roſe up early in the morning, and ſet out on the journey; and ſo without doubt *Noah*, as ſoon as he had notice, immediately obeyed the Divine Command.

Dr. *Bedford* obſerves *, That all the ſpecial Communications which man held with his Creator in the

* *Kennicot's* Diſſertation II.

first ages of the world, were probably made upon the Sabbath, or weekly day of Holiness, and therefore that the Command to *Noah* to enter into the Ark was made on that day; that during the six following the Sabbath, he entered into the Ark with all the animals, and that on the seventh day after, the waters came, that is, on the Sabbath, which *Noah* kept in the Ark. This observation is highly probable; and, in the next place, reason will shew, that the time here assigned was no more than necessary to the ordering all things aright.

1. All the animals of every kind, fowls, beasts clean and unclean, and reptiles were to enter into the Ark; not all at once, or in a hurry, (for there was but one door) but successively, and by pairs, which might well take up more than one day. For on that Sabbath the Command was given, we must suppose the animals were at hand, or drew near to the Ark in that and the two or three following days, and were taken in as they came without delay. 2. They were not only to be taken in, but all to be disposed of in their places or stalls; the beasts and reptiles in the first or lower story, and all the feathered kind in the third or upper story. Now the placing all these in order, would require time, care and thought, and could not be done so perfectly at first, but that they might find themselves obliged to change the disposition in several instances. 3. *Noah* and his family were now to begin a new, difficult, and laborious task; the feeding and watering all the animals, the giving every kind of creature its proper food, and sufficient quantity, which had been gathered and laid up in the Granary, or second story, beforehand to this purpose, besides the cleaning the several stalls and aviaries. This new and extraordinary work to them would require both time and contrivance, to order all things in the best manner; and in order to do so many things as were here necessary,

ceſſary, it was requiſite they ſhould be without diſquiet or fear. It had been highly inconvenient therefore to have deferred entering the Ark with all the animals, till the very day the Flood came, becauſe how ſtrong ſoever their faith might be, yet dread and terror, at ſuch a ſtupendous Judgment on the world, would undoubtedly ſeize their minds on the firſt pouring down of the waters, accompanied probably with lightenings and thunders, which muſt needs render them unfit to order all things in the beſt manner, had not a regular method been contrived and practiſed ſome few days before.

But notwithſtanding the expreſs words of Scripture, and the reaſon of the thing, Mr. *Whiſton* pretends, that *Noah* and the animals entered not into the Ark till the very day the Deluge began. And indeed if we will allow him all his Suppoſitions, he has provided a *Salvo* for thoſe inconveniences that would have attended this late entering into the Ark, for one day at leaſt. His Hypotheſes are theſe. 1. That the Deluge was owing to the near approach of a Comet to the earth, which we have in the former ſection ſhewn to be a great miſtake. 2. That *Noah* dwelt and the Ark was built in *China*, an aſſertion without any poſſibility of proof. 3. That the Deluge began but in one part of the earth at firſt, while all things were calm where the Ark was, a thing neither probable nor proveable. But even with theſe precarious ſuppoſitions he ſeems very inconſiſtent in his ſolution of this Phænomenon. For, 1. He tells us, that this day (the day the Deluge began) though ſo outragious and deſtructive a one to the inhabitants of the other parts of the Globe, was yet here (in *China*) fair and calm, as at other times. Which, ſays he, is thus demonſtrated. "'Tis evident that "the *Gordyean* mountains are ſituated not very far "from the center of our Northern Continent, or "indeed ſomewhat to the North-weſt of the ſame---

"which

" which mountains were almost directly exposed
" therefore to the Comet at his nearest distance.----
" The first fall of the vapours then would only af-
" fect one Hemisphere of the earth, that, namely,
" which was properly exposed to their descent, and
" the other would be not at all affected therewith----
" so that seeing the Ark or *China* was much below
" the point *b*, (in his figure 7.) it would remain in
" the same during all the time of this violent fall of
" the waters, and have a calm and quiet day for the
" entry thereinto." But then in the first Corollary to the LXX solution, he says, " So that now we
" may agreeably, both to the Sacred History, and
" the Calculations from the present Hypothesis, as-
" sert, that the Deluge began at the Meridian of
" *Pekin* in *China*, on *Friday* the 28th day of *No-*
" *vember*, in the year of the *Julian* Period 2265
" about noon." But here, methinks, the *solution* and the *Corollary* flatly contradict one another. For if the Deluge began at the *Gordyean* mountains, as in the *Solution*, how could it begin at the meridian of *Pekin* in *China*, as in the *Corollary*? Again, if it began at *Pekin* in *China*, how was that country, and the Ark in it, free from the first violent fall of the vapours, to which he owns if it had been subject, it would probably have been crushed to pieces by them? 3. The first fall of the vapours, he says, would only affect one Hemisphere of the earth. If by the Hemisphere affected, he means that North of the *Æquator*, are not the *Gordyean* mountains and *China* both in the same, and must be both equally affected by the first fall of the vapours? But if the Hemisphere South of the *Æquator*, how came the *Gordyean* mountains almost directly exposed to the Comet at its nearest distance? Mr. *Whiston* may draw a figure of the earth, with the approach of the Comet, and the fall of the vapours, on what part of the earth his fancy leads him to; but where is all

this while the Demonſtration pretended, except a fanciful figure muſt paſs for a demonſtration?

But now leaving all theſe Reveries about a Comet and the fall of the vapours, and the *Gordyean* mountains and *Pekin* in *China*, and the hour of the day when the Deluge began, which *Moſes* mentions not, (though it be far more probable that it began early in the morning) let us examine the ground of this opinion. It is founded on v. 13. of the ſame 7th chapter. *In the ſelf ſame day entered Noah, and Shem, and Ham and Japheth the ſons of Noah, and Noah's wife, and the three wives of his ſons with them into the Ark, they and every beaſt aftar his kind, &c.* Now here the ſenſe ſhould have been minded as well as the ſound, and theſe words made conſiſtent with what *Moſes* had ſaid in the beginning of the chapter. There are two ways of underſtanding this laſt ſentence, without making *Moſes* contradict himſelf in the compaſs of a few verſes. 1. We may obſerve that when God gave *Noah* a command to build the Ark, and gather of all food that was eaten, it is added, *Thus did Noah, according to all that God commanded him, ſo did he*; that is, he immediately ſet about the work, the preparing the work in the firſt place, and gathering the food as ſoon as it became neceſſary. So here likewiſe, when the Command was given him to enter into the Ark with the animals ſeven days before the Flood came, it is alſo added, *And Noah did according to all that the Lord commanded him*; that is, he went in as ſoon as he received the Command, when the ſabbath was over; and ſo it is added, v. 7, 8 and 9. *And Noah went in, and his ſons, and his ſons wives, &c.* And then it is ſaid, v. 10. *And it came to paſs after ſeven days* (or, on the ſeventh day) *the waters of the Flood were upon the earth.* Here then it ſeems very plain that they entered into the Ark before the Flood came; and therefore what is ſaid, v. 13, 14, 15, 16. is only a repeti-

repetition of the same thing with some variation and enlargement *, to wit, the sons of *Noah* expressed by their names, which had not been done before, neither in the first nor seventh verse, with some variation also in recounting the animals; and besides, with this remarkable and necessary addition in the Conclusion, *And the Lord shut him in*, so that the *self same day* has no need to be referred to the very day the Flood came, but means only this, that *Noah* and his sons by name, with their wives, and the animals of every kind, male and female, went into the Ark, on the self same day, or at the same time, as he had before said, ere the waters were on the earth. Such repetitions, with some variation or addition, are very frequent with *Moses* and the other Sacred Writers, of which we have two or three instances in this very chapter, and on this very subject; as v. 6. *And Noah was* 600 *years old when the Flood of waters was on the earth*; and v. 11. *In the six hundredth year of Noah's life, &c.* Again, v. 12. *and the rain was upon the earth* 40 *days and* 40 *nights*; and v. 17. *and the Flood was* 40 *days upon the earth.* And again, what is said of the animals in v. 8. and 9. is repeated in v. 14, 15 and 16. but with some little variations. But

2. The words may be very well understood, according to that sense *Junius* and *Tremellius* give them in their Translation of the 11, 12, and 13 verses. " Anno sexcentesimo vitae Noachi, mense secundo, " decimo septimo die hujus mensis, hoc ipso die dif- " fiderunt se omnes fontes Abyssi magnae et Cata- " ractae Coeli se aperuerunt, ut esset imber ille su- " per terram quadraginta dies et quadraginta noc- " tes, eodem ipso die *quum* ingressus esset Noah, et " Schem, et Cham et Japheth filius ejus, &c. in

* Amant Hebræi verborum copiam, itaque rem eandem multis verbis exprimunt. *Grotius.* The reason of the *Pleonasm* is given by the learned Mr. *Warburton.*

" Arcam."

" Arcam." " In the ſix hundredth year of *Noah*'s " life, in the ſecond month, on the ſeventeenth day " of that month, on that ſame day all the fountains " of the Great Deep were broken up, and the Ca- " taracts of Heaven were opened, that the rain " might be upon the earth 40 days and 40 nights; " on that ſelf ſame day, *when* (or *after that*) *Noah* " and his ſons, *&c.* had entered into the Ark." So that the *ſelf ſame day* in v. 13. does not refer to the day of *Noah*'s entering the Ark, but is a repeated aſſertion, that the rains deſcended, and the fountains of the Deep were broken up, both on the ſelf ſame day; and the adverb *quum*, *when*, or *after that*, is neceſſarily to be underſtood.

SECT. III.

Whether the Poſterity of Noah *had any means whereby to know for certain, what the true extent of the Deluge was?*

HAD thoſe who now doubt or diſbelieve the relation of the Deluge given by *Moſes*, lived in ſome of the firſt ages after the Flood, they might ſoon have been ſatisfied of the truth by ocular demonſtration; ſince it is not a point of *Speculation*, but a matter of fact that is in queſtion; and if the Deluge was Univerſal, it muſt needs leave indelible marks of itſelf in every place for many ages after. But though theſe Unbelievers did not, yet the children of *Noah* lived in thoſe firſt ages; and therefore in a courſe of years, though not immediately, could not but know for certain how far the Deluge had extended, whether over all the earth, or only ſome ſmall part of it; and as they found it in fact to be, ſo would the report or tradition thereof be delivered down to all after ages.

In

In order therefore to answer the question proposed in this section, let it be remembered, that it is confessed on all hands, 1. That there was a Flood in the days of *Noah.* 2. That *Noah* and his house were saved in an Ark from that Flood; and 3. That animals of every kind were taken into the Ark by him. These three points are not called in question, at least by those I have to do with. From these confessed facts then it is evident, that *Noah* himself was fully persuaded that the Flood would be universal in extent, otherwise he would never have bestowed so much time and labour in building so large a vessel, nor yet have taken the trouble and care of all the animals in it for a year, since had the Deluge been only *partial*, and confined within small bounds, as some pretend, there was a much easier and speedier way for his safety, by removing into some distant land, whither the Deluge was not to reach; and after the warning given him, he had time sufficient to have removed to any part of the earth.

But notwithstanding this full persuasion of *Noah* that the Deluge would be Universal, we will, for Argument's sake suppose, that he might be mistaken, and that some of his descendants might doubt whether the Flood was so wide extended as their father made them believe, from a Revelation, he said, that had been communicated to him. Nay, let us suppose that some of his posterity were as much Scepticks and Infidels in this point as some are now. If we will suppose this, I say, we must likewise suppose, that they would be very earnest to know the truth of the matter, and be very inquisitive into it for their own satisfaction. And thus we are naturally brought to the question proposed, *viz.* Whether the posterity of *Noah* had any means whereby to know for certain what the true extent of the Deluge was?

I think it will appear very evident, that how doubtful or uncertain ſoever they might be as to this point, for ſome time after their coming out of the Ark, they could not but in a courſe of years diſcover the truth; when by their increaſe, and ſpreading themſelves over the face of the earth, they might with certainty know where the Deluge had extended, and where not, in caſe it was not Univerſal. For,

1. If the Flood was univerſal in extent, as it is affirmed by *Moſes* in his Hiſtory, the poſterity of *Noah* would find no remains of mankind, nor of their dwellings, nor any ſtanding monuments of former tranſactions, into what countries ſoever they came after their Diſperſion; nothing but the wrecks and ruins of a deſolated world, which muſt have been very apparent, for many Centuries after the Flood in all parts of the earth, till it became inhabited and cultivated by mankind. But if contrariwiſe they found any of the former race of mankind, any places unbroken and cultivated as before the Flood, they might then be certain that the Flood had not reached to thoſe parts. Again, if the Flood was Univerſal, they muſt needs find viſible marks of it in all places for many ages, when they came to extend themſelves into the remoteſt parts in a ſucceſſion of Generations; if it was not, they muſt needs find a vaſt difference in thoſe places where it had not reached. Here was then a certain and infallible way whereby to know the truth in this caſe beyond all poſſibility of doubt or deception. And from this certain means of knowledge, by ſenſe and experience, the report or tradition of the extent of the Deluge would be handed down to poſterity, as they found it in fact to be. But if the tradition of the Flood's being Univerſal prevailed all over the World, as is evident from hence, that

moſt

most nations in the most distant parts retain an obscure knowledge of it to this very day, then this is a certain proof that the Deluge was really and actually Universal; for had it been local, or partial, in one part of the earth only, such a tradition could never have prevailed all over the world.

2. We have before proved, that the earth was full of people before the Flood. In that case then, where should the posterity of *Noah* have found room to settle, when they increased and multiplied after some generations? But so far were they from being under any difficulty in this particular, that for more than eleven or twelve hundred years after the Deluge, the earth was not thronged with inhabitants, and great part of the lands lay yet in common, as is evident from the History of *Abraham*, *Isaac* and *Jacob*, who removed from place to place in the Land of *Canaan*, as their occasions required, undisturbed, though they had not a foot of land they could call their own, save a burying-place or two.

But though there be not the least ground in Scripture to imagine, that there were two distinct races of men of different originals after the Flood, the one *Antediluvians*, the other *Post-diluvians*; yet Mr. *Coetlogon*, who seems always willing to help Infidelity at a dead lift, imagines that he has even there found out this distinction and different races.

" *Abraham* and his family, says he, which was " but the sixteenth generation from *Shem*, when " they went into *Canaan*, and from *Canaan* into " *Egypt*, don't seem so much as to have the least " notion of those people from whence they came, " who was their first parent or founder, though ac- " cording to the text they should have all sprung " from the same source; and not so long since " neither, as to be quite out of their's or of *Adam*'s

" (*Abraham*'s) remembrance. How could we then " depend on the relations of those times; for *Noah*'s " descendants having overspread the whole earth, " since so near the time of their separation, their " own descendants don't seem to have known it " themselves; and the nations who inhabited those " parts so near the place of their separation, are " considered by *Abram* and his family as a quite " different sort of people, entire strangers to them. " The *Egyptians* were a formidable people, their " monarchy very well established, and pretended " to reckon a considerable succession of their Kings " when *Abram* came among them with his family, " which did seem then like a new race, newly be- " gun the world, though *Abram* was descended " in a direct line from *Shem*, one of *Noah*'s favou- " rite sons, to whose posterity a particular blessing " seemed to be annexed."

The meaning of this not over clear paragraph is, that neither the *Canaanites* nor *Egyptians* knew any thing of *Abraham*'s race or genealogy, nor he of theirs, so that they seemed to one another to have sprung from different sources. Now this is news indeed. But whence does he collect this? Not from Scripture surely; for to any one who reads there the history of mankind after the Flood, this must appear the very reverse of the truth. *Noah* had but three sons, *Japhet*, *Cham* and *Shem*. The Land of *Canaan* was then the possession of the *Canaanites* descended from *Canaan* the fourth son of *Cham*, and whose name it bore. *Egypt* was also called the Land of *Ham*, even to the days of St. *Jerome* *. And both *Canaanites* and *Egyptians* knew that

* Frequenter Septuaginta Interpretes non valentes *Heth* literam, quæ duplicem aspirationem sonat, in Græcum sermonem vertere *Chi* Græcam literam addiderunt, ut nos docerunt istiusmodi vocabula asperari debere, unde et in presenti loco *Cham* transtu-

that *Abraham* came out of *Chaldea* from beyond the River, viz. *Euphrates*, and also from whom he was descended, namely, from *Heber*, of the posterity of *Shem*, for he had the appellation of *Abram the Hebrew.*

2. When *Abram* came out of *Chaldea* into *Canaan* and *Egypt*, he and the inhabitants of those lands were no doubt strangers to one another, that is, they had never seen one another's faces before; but will it therefore follow that they knew nothing of one another's race or pedigree? If a noble *Frenchman* or a *German* comes into *England*, is it not soon known from what country he comes, and of what family he is?

3. *Abram*, says he, was but the sixteenth generation from *Shem*. Here he is mistaken, *Abram* was but the tenth from *Shem*, though we take in *Cainan* with the *Septuagint* and St. *Luke*; and *Moses* himself was the sixteenth. And was the sixteenth generation (according to him) so near the time of the separation? It would be more than 1600 years in those days of Longevity. In a word, these mistakes, I am apt to think, are owing to an egregious blunder. There is a passage in the History of *Joseph* which may have given birth to them. When *Joseph*'s brethren came out of *Canaan* into *Egypt*, to buy corn in the time of the famine, *he made himself* strange *unto them, and spake roughly unto them, and said unto them*, Whence come ye? This he has apparently transferred to *Abram*, as if the *Egyptians* knew not whence *Abram* came; and so has confounded times, persons and facts.

t anstulerunt pro eo quod est *Ham*. A quo et Ægyptus usque hodie Ægyptorum lingua *Ham* dicitur.—— Now if *Egypt* still retained the name of *Ham* in St. *Jerome*'s days, could this be unknown in the days of *Abraham* and *Moses?* Or could *Abraham* be ignorant from which of the sons of *Noah* the *Egyptians* were descended?

SECT. IV.

Whether Moſes *was under any temptation from Political Views to enlarge the Extent of the Deluge, or recede from the general Tradition thereof.*

HAVING in the preceding ſection ſhewed, that the true extent of the Deluge muſt have been well known and eſtabliſhed in the world long before *Moſes* wrote his Hiſtory, it may be proper in the next place to enquire, whether *Moſes* has given a true relation of this univerſal Tradition? Or whether he might not, from ſome political view, give another account of it in his Hiſtory, than what mankind before his writing did really believe it to have been?

Now it ſeems highly improbable that *Moſes* would give a different account of the extent of the Flood, from the common tradition eſtabliſhed in the world, for theſe reaſons.

1. Becauſe if he had, his own people would have ſoon diſcovered the falſity of his narration, as no ways agreeable to the tradition they had received from their Forefathers: Nor were they ſo ready to take his bare word in things contrary to the publick faith, nor ſubmiſſive always to his authority, but that they often murmured againſt him, and were ſometimes ready to ſtone him. 2. Becauſe had he given any other account of the Deluge than what they had received from their Forefathers, it muſt neceſſarily have diſcredited his whole Hiſtory, ruined his authority, and made them pay little or no regard to the many laws he delivered them, as from the mouth of God, and by which he bound a heavy

heavy yoke upon them. 2. From that sincerity, simplicity, and naked relation of facts, without any disguise or colouring, which shine with great lustre throughout all his writings, no man of reason and judgment can think, that he could be guilty of imposing a notorious falshood on the world, in representing the Deluge Universal over all the earth, if he knew it to be otherwise in fact.

But notwithstanding these clear evidences for his truth and sincerity, Mr. *C*——who befriends Infidelity as far as he can, pretends to suspect *Moses* of prevarication in this particular of the Deluge; and in order to lessen his character tells us,

" That that Inundation having been the first of " the kind, when related to *Moses* with all the ex- " aggerations of the relators, might have appeared " a prodigy to him, who had never heard of any " thing like it before. [No: I dare say he never had.] " And *Moses* himself, who was glad of all the oppor- " tunities he could make use of to keep the stiff- " necked people under his conduct in awe, [where " is there one such instance to be found,] or by the " hope of some rewards, or through the fear of some " punishment, might have exaggerated that His- " tory himself, with no other design than to inti- " midate the Jews by the apprehension of being " treated with the same severity, in case they were " to rebel against God, or those whom he appointed " his Vice-gerents among them, for which *Moses* " could not be blamed; since those things which " we called (call) pious frauds have always proved " of some utility in all Religions, and under all " sorts of Government." But as a *salvo* to this impious suggestion, he adds,——" Though I have " not the presumption to say, that *Moses*'s relation " of the Flood is of that kind."

In this paſſage it is ſuggeſted, that probably the account of the Deluge may have been much exaggerated beyond what it was in fact, either by thoſe who related it firſt to *Moſes* (for it ſeems he took it only from hearſay) or by *Moſes* himſelf from a political view. But we ſhall fairly acquit them both from any inſincerity or unfaithfulneſs in this point. For,

1. The Deluge was a matter of fact, the extent of which, how large or bounded ſoever, was known and put out of all doubt and uncertainty ſome ages before *Moſes* was born; nor is there any reaſon to imagine, that thoſe who related the matter to him ſhould give any other account of it, than what the common belief and tradition was.

2. *Moſes* was firſt nurſed in his own family, was not ignorant of his own people, and could not but know from them the tradition of their fathers. After his infancy, he was brought up in the Court of *Pharaoh*, and taught in all the learning of the *Egyptians*, where he ſtayed till he was forty years old, and ſo had full time and opportunity to know the account they gave of the Flood. When he was obliged to leave *Egypt*, he dwelt 40 years more in *Midian*, where he had leiſure ſufficient to converſe with *Jethro* his father-in-law, on that and all other ſubjects. Now it would be ſtrange if *Iſraelites*, *Egytians* and *Midianites* ſhould all conſpire to deceive *Moſes*, and impoſe a falſhood on him for truth? But if theſe different nations gave him one and the ſame relation of an Univerſal Flood, then this is an undoubted proof of the uniform tradition of the Deluge that was then current in the world, from which, as I ſaid, *Moſes* would not recede in his relation of that dreadful Event.

But perhaps *Moſes* might himſelf exaggerate this event, out of policy to keep the people in awe, &c.

How

How well this Imagination agrees with the character and history of *Moses*, will presently appear.

1. *Moses* had not the least temptation to use any sinister means to keep the people in awe: He had shewed signs and wonders sufficient to justify his Mission, and establish his authority.

2. He had the most powerful motives, and effectual means to persuade the people to obedience, such as no Legislator before or after him could make use of, because they never had it in their power to make them good; I mean, the temporal rewards and punishments, which were the sanctions of his Laws —— The Rewards of all manner of temporal blessings to their obedience, and, on the contrary, the Infliction of all manner of temporal evils, specified at large, to their disobedience. Of both which blessings and cursings, they had the experience in several instances, even during the life of *Moses*; of the first, in their being fed with *Manna* and *Quails*, and drinking the waters fetched out of the rock, their deliverance from the *Egyptians* who pursued them, and some victories; of the latter, in the plague sent among them, the fiery serpents, the uncommon end of *Corah*, *Dathan* and *Abiram*, &c.

3. The solemn manner of giving the Law on Mount *Sinai* with thunderings and lightnings, the smoke and the fire, and the voice of the trumpet exceeding loud, all which the people heard and saw, did more than *intimidate* them, it struck them with dread and terror, insomuch that they said unto *Moses*, *Speak thou with us, and we will hear*, (i. e. obey) *but let not God speak with us lest we die.* But,

3. Such a malevolent suggestion could proceed from nothing but mere ignorance of the relation of the Deluge, and in this ill chosen instance will appear quite ridiculous. And this we shall now shew

to

to be the caſe—— When the Deluge was ended, and *Noah* had offered his ſacrifice of thankſgiving and prayer, " The Lord ſaid in his heart, I will " not again curſe the ground any more for man's " ſake, although the imagination of man's heart be " evil from his youth, neither will I again ſmite " any more every living thing as I have done. " While the earth remaineth, ſeed-time and har- " veſt, ſummer and winter, day and night ſhall " not ceaſe *." This gracious purpoſe of the Divine Being is afterwards communicated to *Noah*, in full and expreſs terms—— † " And I, behold I " eſtabliſh my covenant with you, and with your " ſeed after you, and with every living creature " that is with you; of the fowl of the air, of the " cattle, and with every beaſt of the earth that is " with you, from all things that go out of the Ark, " to every beaſt of the earth——And I will eſta- " bliſh my Covenant with you, neither ſhall all " fleſh be cut off any more by the waters of a " Flood, neither ſhall there be a Flood any more " to deſtroy the earth." Thus was God pleaſed to enter into a ſolemn covenant, not only with *Noah* and his ſons, but even with every living creature, that he would not deſtroy them nor the earth any more by a Flood of waters. Moreover to ſecure mankind to the end of the world from all fears of an Univerſal Judgment of the ſame nature, it is added. " And God ſaid, this is the token of the " Covenant which I make between me and you, " and every living creature that is with you for " perpetual generations. I do ſet my Bow in the " cloud, and it ſhall be for a token of a covenant " between me and the earth: And it ſhall come to " paſs, when I bring a cloud over the earth, that

* Geneſ. viii. 21, 22. † Geneſ. ix. 8—17.

" the

" the Bow shall be in the cloud, and I will remem-
" ber my covenant between me and you, and every
" living creature of all flesh: And the waters shall
" no more become a Flood to destroy all flesh.
" And the bow shall be in the cloud, and I will
" look upon it, that I may remember the ever-
" lasting covenant that is between God, and every
" living creature of all flesh that is upon the
" earth."——How earnestly, and how seasonably is all this said, inculcated, and repeated again and again, to deliver mankind from that dread and terrour, which would otherwise have seized on their minds, as often as they reflected on that dreadful overflowing scourge which had destroyed all flesh; and to secure them against those fears they must otherwise have laboured under, that the earth and all mankind might be destroyed again by a Flood of waters. Without this covenant and solemn asseveration, they could not have been secure, but that what had once happened might happen again.

Is it not very apparent, that had *Moses* been a man of guile, or wrote from a political view, and with a design to intimidate the people by his relation of the Deluge, he would have concealed this part of its history, and kept out of view this ample and gracious declaration of the Almighty, so necessary, and so reviving to mankind at the time? And how ridiculous would it have been to exaggerate a partial Deluge into an Universal, in order to keep the people in awe; and with the same breath to assure them, in the most solemn manner, that no such thing should ever happen again to the end of the world.

5. As to the *pious frauds*, and their utility in all Religions, and under all Governments, here justified, or at least excused, we know from what quarter that comes recommended. But whatever uti-

lity they may be of in human Governments or *false* Religions, they can be of no service to the *true*, which wants them not, nor ever proposed to persuade or convince men but by reason and truth. On the contrary, they would do the greatest disservice to it; nor can any instance of such be given in *Moses* or the *Prophets*, in *Christ* or the *Apostles*. They who make use of pious frauds must be weak minds indeed, or rather have other ends to serve than those of true Religion. Sincerity and Truth are as essential to true Religion, as Holiness and Righteousness. God is *the God of Truth*, and all that comes from him must be truth; for *the fruit of the spirit is in all goodness, righteousness and truth*. But the Devil is the Lyar, and the father of lyes: and they who falsify the truth, or make use of frauds falsely called *pious*, but truly *impious*, are so far partakers with him.

"*For which*, says he, *Moses could not be blamed*." No! surely but he could. Every honest man, and lover of truth, *Christian* or *Heathen*, must have blamed him, and that justly; and his character for sincerity and truth must have fallen to the ground. If he prevaricated in one instance, he might do so in others, and there could be no dependance on the truth of his history. I think it is very apparent, that Mr. *C*——'s main design, in this whole *Antediluvian* Article, was slyly to invalidate the authority of Sacred Scripture, and render it of dubious and uncertain faith, in order to carry on the *pious frauds* of a certain party, whose endeavours are ever restless against the truth, *who have learned to do evil, that good may come, whose damnation is just* *.

* Rom. iii. 8.

6. But

6. But to leave this our Philosopher for a while. From the tenor of that gracious and merciful covenant into which God was pleased to enter, not only with *Noah*, but with every living creature also that was with him in the Ark, arises a full and convincing proof of the Universality of the Deluge, superior to all cavils and objections—— All mankind had been destroyed by the Flood, save *Noah* and his house; and God in that Covenant promises not to destroy mankind any more by the waters of a Flood, notwithstanding that he knew men would still be wicked. All the animals had likewise been destroyed, except those that were with *Noah* in the Ark, and therefore God condescends to promise, even to these inferior creatures, that he would not, after this manner, destroy them all again. But now if, as some have supposed in support of a partial Deluge, that all the animals were not destroyed, but those only where mankind lived, what occasion was there for this condescending covenant with the animals? The only reason of which was, that all other animals on the face of the earth had been destroyed, save those in the Ark; as for the same reason God entered into covenant with *Noah*, because all mankind had been destroyed by the Flood, save he and his house. Hence it evidently appears, that the Flood had been over all the earth; which was the point to be proved.

7. From God's making the Rainbow, the token and memorial of his covenant, some have thought that there was no Rainbow * before the Flood. But

* *And the Bow shall be in the Cloud.* Not that before the Flood there was no such creature, but that then this use of the creature was ordained; any more than that there was no water, bread or wine before the institution of the Christian Sacraments; which name and dignity, not *Nature*, but *Use*, by the appointment

But this is a miſtake. For in that caſe there would have been no rain before the Flood, which cannot be ſuppoſed; for how then ſhould the earth have brought forth her fruits? But how the rainbow, a natural and common phænomenon, came to be made the token and memorial of this covenant, ſee the learned Mr. *Warburton*'s *Divine Legation* *.

But now for a finiſhing ſtroke with our Univerſal Philoſopher, and we have done. In order to ſhew the feaſibleneſs of magnifying a particular Flood into an univerſal, he brings a ſimilar caſe. "Men of any religion, ſays he, at all times, and "in all ages, have always repreſented thoſe phæ-"nomena and extraordinary events, as a ſcourge "in the hands of the Almighty to puniſh the ſins "of mankind; ſo that if the ſea was to overflow "the Digues in *Holland*, and drown the whole "country, (as ſuch a thing might very well hap-"pen without a miracle) our poſterity two or "three hundred years hence, would eaſily be per-"ſuaded, that ſuch an accident happened to pu-"niſh the ſins of the *Dutch*, or believe, perhaps, "that all *Holland* (all the *United Netherlands*, he "would ſay) had been overflowed, when the in-"undation had been confined to one Province, or "perhaps to a part of it."

ment of the God of Nature and Grace, gave unto them. For not in the clouds alone is this Bow to be ſeen, but as further witneſs of the natural cauſe and conſtitution thereof, the ſame effect may be ſhewed, by concurrence of the like cauſes in the waters and rocks, where rivers have their fall, yea, on the buildings of men; as I myſelf have ſeen a perfect rainbow by the reflection of the ſun-beams on a boarded wall of a water miln, the boards thereof being very wet with the fall of the water and oppoſite to the Sun. *Purchas.*

* Vol. II. Ed. 2. p. 335. Note.

Why

Why really men, if they have any religion, or if their hearts be not quite hardened, will be very ready to think just as Mr. *C*—— here says. For though we cannot pretend to judge of the state of particular persons, by the evils that befal them in this life, (which to them may be beneficial) yet when a sweeping, devouring scourge of water, fire, the sword, pestilence or famine, shall destroy or lay waste whole cities and countries, as was done to *Sodom* and *Gomorrha*, we may justly conclude them sent to punish the sins of the inhabitants; since all these instruments of destruction are in the hands of the Almighty Governor of the world, and *fulfil his word.* Nor need we wait 2 or 300 years to make this judgment, but would presently conclude thus on the certainty of the fact. And should the sea happen to overflow all the Digues in *Holland*, and drown the whole Province, (which God forbid) not only the neighbouring Provinces, but others also would undoubtedly look upon it as a judgment from Heaven; for though this might happen without a miracle, yet could it not well happen without violent winds and inundations from the sea and rivers, all which things are at his command who governs the world.

But how much better Heathens can reason on such a destructive event, than some pretended Christians, will appear from the effect which the inundation of the Province of *Sancy* in *China* had upon a neighbouring Province, that of *Canton* (for we know nothing of the others) a relation of which I gave in the Section of particular inundations. Now follows the account how the news of it was received at *Canton.*

From the first day that this news reached the city, at two o' clock in the afternoon, proclamation was ordered to be made of it, through all the principal

principal ſtreets of the City, by ſix men on horſe-back clad in long mourning garments; who with a ſad and lamentable voice, went through the ſtreets crying, " Miſerable Creatures! who ceaſe not dai-" ly to offend the Lord of all things, hear the " moſt diſmal and mournful event that can ever " reach your ears; hear it with crying, lamenta-" tion and tears. You are to know, that for the " ſins of us all, God hath taken the ſword of his " divine Juſtice in his hand againſt all the people " of *Cuy* and *Sancy*, deſtroying promiſcuouſly with " water, fire, and ſtorms from Heaven, all that " great Province of *China*, without ſaving one ſoul, " but a child whom they have ſent to the Emperor." Hereupon they rung a little Bell thrice, at which all the people falling down to the ground, cried with a lamentable voice, *God is righteous in all that he doth.* When this was done, all the people retired to their houſes, which were cloſe ſhut up for five days, and the city looked ſo much like a deſart, that not a living creature was to be ſeen; at which we *Portugueſe* were confounded, and ready to faint, when we could not find a ſoul to ſpeak to.

At the end of the five days, the *Chaem* and the *Anchaſſis* of the Government, together with all the people, went in proceſſion through the principal ſtreets of the city, while the prieſts, who were in number more than 5000, cried with a voice loud enough to pierce the Heavens, *O wonderful compaſſionate Lord, regard not our iniquities, for if thou keepeſt them in remembrance, we ſhall be dumb before thee!* To which the people anſwered, with a loud and lamentable voice, *Lord, we confeſs our faults before thee.* And thus the proceſſion went along, till they came in the end to a magnificent temple called *Nacapirau.* The next day they went in the ſame manner to another temple called the *God of Juſtice,*

Justice, and continued this form of procession for 14 days together, during which time a great many charities were done, and many prisoners set at liberty. Many sacrifices were also offered of the perfumes of *Aloes* and *Benjoin*, likewise many bloody sacrifices of cows, deer and swine, the flesh of which was given to the poor. After this, during the three months that we were there, they continued to do many other good works, at so great an expence, and with so much charity, that had the faith of *Jesus Christ* been joined with them, we may justly think they would have been very acceptable to Almighty God.——The King left *Pequin* and came to *Nanquin*, where it was said he did great charities, and set at liberty a number of slaves, among whom, it pleased God, there were five *Portuguese*, who had been detained prisoners in the city of *Pocassin* for more than 20 years. These came to *Canton*, where they related to us many great things done. Among the rest, that the charities which the King had given amounted to 600,000 Ducats, without including the magnificent temples he had built to appease the anger of God, one of which was erected in this city, very magnificent and sumptuous, under the name of *Hypatican*, i. e. *The Love of God.* Fernand Mendez.

Our Author here confesses, that this wonderful humiliation, and devotion of the *Chinese*, put them that were *Christians* to shame. And in truth should any such dreadful judgment befal this Island, (which God in his mercy forbid) that a whole county or shire was drowned, or otherwise destroyed, and every living creature therein perished, the News-papers would undoubtedly give us repeated accounts of the calamity; but as for any such severe humiliation, great devotion, vast charities, building of churches, &c. I fear, we should hear not a syllable; nor

would

would the horſe-races or cock-fightings, two of the ſources of vice and drunkenneſs among the common people, nor any other faſhionable or criminal diverſions in the *Metropolis*, or other cities of the kingdom, be omitted for one week, or, perhaps, one day on that account. We are come to that paſs, that we *regard not the Lord, nor the operation of his hands*, we mind neither his mercies nor his judgments.

Thus we ſee what reflections men, by the mere light of nature or improved reaſon, would make upon publick calamities or judgments.----But now as to the ſimilar inſtance which Mr. *C*---- has brought to ſhew how eaſily things may be magnified far beyond the truth, it will recoil with double force upon himſelf. For how could we believe that all *Holland*, or all the ſeven provinces rather, had been drowned, when only one, or a part of one, had ſuffered that calamity? What he here ſuppoſes only, is real fact, actually has happened, and is mentioned by himſelf at the cloſe of this Article; but the very contrary of what he brings this inſtance for, is moſt notorious. "Of the like kind, ſays he, were thoſe in-
" undations in the *Netherlands*, which, in 1277,
" overwhelmed and covered with ſea, all that part
" now called the gulf of *Dollart* in the *United Nether-*
" *lands*; and in 1421 all that part between *Brabant*
" and *Holland*." Now it is near 500 Years ſince the firſt of theſe inundations, and above 300 years ſince the laſt of them. But did ever any one from that time to this believe, that theſe inundations had drowned all *Holland*, or all the *United Netherlands*? Or was there ever any ſuch report made, or falſe tradition of them handed down to poſterity? Or how could ſuch a report be believed for a year or a month, when men might daily ſee the contrary with their eyes, and thouſands of the inhabitants were

were alive to contradict it? The like we may say of the inundation of the whole Province of *Sanci* in *China*, or that very large one for 300 leagues along the coast of *Peru*; was there ever such a report as that all *China* or *Peru* were destroyed? In truth, the simile he has brought is a very pleasant one. Instead of shewing thereby what he intended, he has effectually proved the impossibility of the thing.---- From the supposed case, but real fact, here alledged by himself, it is manifest beyond all contradiction, that no particular inundation ever could, or ever did, for any time, pass for a general one, because contrary to certain knowledge and experience. This it proves in the first place. The plain and necessary consequence of which, in the next place, is, That the tradition of an Universal Deluge could never have prevailed in the world as it did, but from certain knowledge and experience, that in fact it was Universal.——Therefore the account which the Sacred Historian gives of the Universality of *Noah*'s Flood, supported by universal tradition, is undeniably the truth of the case. Which was the Point to be proved.

AN

ALPHABETICAL

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