

REMARKS

On some Late

PAPERS,

Relating to the

Universal Deluge :

And to the

Natural History

OF THE

EARTH.

By *JOHN HARRIS*, A. M.
And Fellow of the *Royal Society*.

L O N D O N,

Printed for *R. Wilkin*, at the King's
Head, in *St. Paul's Church Yard*, 1697.

Jos: Banks

THE PREFACE.

I Question not but many judicious Persons will think that the Two Essays from Oxford really deserve to be slighted and forgotten, rather than Answered and Animadverted on; and indeed, I was my self of that Opinion, when they were first Published. But sometime after, I found 'twas given out by some, with whom, I perceive, a trifling and incoherent Pamphlet prevails more than a judicious and methodical Discourse, That the Essayer had Silenced Dr. Woodward, and put an effectual stop to the Progress of his larger Work. I found also that the Pamphlet was applauded generally by Men of loose Principles: such as make their small stock of Philosophy subservient only to Scepticism, and Infidelity: and who are always pleased with one that will lend his helping hand, tho never so lamely, towards the Depreciating the Authority of the Sacred Writings. This first induced me to begin some Remarks on those Essays. And
A when

The Preface.

when sometime after I saw that L. P. persisted implacably in the same design: That he sent out Pamphlet after Pamphlet to carry it on, tho' under different shapes and disguises: as his Extract of those Essays, his Letter about Petrifications, and then his Additional Remarks before Mr. Robinson's Book; (not to mention one or two more that are indeed so trifling they deserve no mention.) These were fresh Inducements to me to go on, and made me judge it very necessary to set in their true light L. P.'s Argument and Design; that so the World might see the Precariousness of the one, and the unfairness of the other. And tho' Dr. Woodward indeed himself was the fittest on all Accounts for this Province, yet knowing how earnestly he was engaged in the completing of his Promised Work: and being very unwilling that any Delay or Impediment should be put to that great and useful Design, more than what doth unavoidably arise from the necessary attendance on the Business of his Profession, I was willing, with his leave, to take this trouble off his Hands.

What the Motives were that influenced L. P. so warmly, and so unband-
somely to fall on Dr. Woodward, and
his Book, he himself best knows.
This

The Preface.

This I can safely say, that neither this angry Writer, nor any one else I have met with, hath in all this time offered one Objection of any weight, when duly examin'd: or invalidated so much as one Single Article of any of the numerous Propositions the Doctor hath advanc'd. 'Tis no new thing for Discoveries of worth and importance to meet with ill treatment from invidious and morose Men. These have been the Pest and Complaint of all Ages: and the great Discouragers and impeters of Learning and Knowledge. They pass by Pamphleteers and Scriblers (for to fall upon them would be unnatural, and no other than a preying upon their own Kind) and 'tis only the deserving and ingenious that are obnoxious to their fury. 'Tis not that Dr. Woodward's Performance was ill, but that 'twas very well: or that he was a Plagiary, but that he was far above that unworthy imputation, that incited L. P. to so unhandsome an Usage of him. And so far is it from any manner of Disparagement, that 'tis a real Credit to be thus opposed by one who every where discovers himself to be as much a stranger to good sense, as he is to good manners. Besides, this Writer hath attack'd only the meanest part of Dr. Woodward's Work. We do not value that Work, for informing us (what L. P. keeps such a

A 2 Pother

The Preface.

*Pother about) that the Earth consists of Strata, or that the shells dug up at Land are real, though 'twas necessary for him to clear even that, after some with a great deal of Learning and Subtilty had puzzled and perplex'd it: no, the great Beauty and Excellency of that Work consists in the many and important Propositions that are with so much clearness and certainty raised upon the Observations. I know very well L. P. and some of his Adherents have represented this Work as only a meer Theory: and the things in it as rather promised to be proved hereafter, than really already made out; a thing very injurious to the Labours of this worthy Gentleman. 'Tis true, because of the narrow Bounds he was there confined to, he is constrained sometimes to break off, and defer some things to be further treated of in his Larger Work. But these are all Subordinate, and such whereon the Primary Propositions do not necessarily depend: these are what may be set aside, and yet the Chain that runs through that Work be preserved intire. And the better and more discerning part of Mankind agree that those Propositions are abundantly warranted by the Observations, and proved beyond any reasonable Contest, to those who can judge of a Proof: to those who can discern Consequences, and will take the pains to examin
and*

The Preface.

and confer things; and they who will not, do not deserve the Satisfaction and Information they might reap from a close perusal of that Book. There's a turn and Contrivance in that small Treatise that such as L. P. are so far from being Masters of, that they'll, it may be, never discern it. They who shall please to make Tryal, will find 'tis no easy matter, in so little Compass, to set so many things in such light as we there find them. This I am sure I never yet knew any Person of capacity, and judgment in these studies, but who did still the more approve of this Work, the more carefully and frequently he perused and considered it; especially if along with this, he had applyed himself to examine the Internal structure of the Earth, and the Circumstances of the Fossil Shells and other marine Bodies, which are every where so plentifully found buried in it.

The Dissolution of the Earth at the Deluge, is a point I perceive that some will not get over: and others, I know not how, mistake the Doctor's sense about it. But as a considerate view and serious Examination of the several Strata of our Globe, and of all the Circumstances of those various Bodies that are included in them, must needs convince any one that there was actually such a dissolution: so he that carefully reads over the

The Preface.

Essay towards the Natural History of the Earth, and studiously compares the several Parts of it with each other, cannot, I think, well either doubt of it, or be mistaken in Dr. Woodward's meaning about it. And therefore I wonder that a late Learned Writer * should Charge the Doctor with Attributing that Dissolution to the Power of the Water: Nay, and that he should further assert that That is One of the Grounds which he designs to build his Theory upon; for the Doctor nowhere so much as intimates any such thing: nor doth he suppose that the Water dissolved the Compages of the most rigid Fossils, Marbles, and Adamants, or any thing like it; † whatever this Author is pleased here to give out.

* Conference with a Theist. Part 2. p. 192.

† Vid. in-
super Re-
marks on
the Two
Essays p.
26, &c.

I think I may very modestly as well as truly say, no Man, who is a competent Judge, but must allow that Dr. Woodward's Work stands upon too broad and firm a Foundation of Nature ever to fail for the main of it. He might indeed, since no Man is infallible, have committed some Oversights in a Work of the vast Extent that is; which yet no one hath hitherto discovered in it. If any such shall appear, I dare engage, such is his regard to Truth, no Man shall more ingenuously yield, or more readily retract a Mistake. Nor of this do
we

The Preface.

we indeed need any other Proof than the Instructions for making Observations in all parts of the World, which he not long since Published. For in that Tract the Doctor fairly submits to the Test all that he hath set forth in his Book: he appeals to the Scrutiny and Examination of Mankind, whether things be so, as he hath represented them, or not: He requests of all Persons, who have the Curiosity and Opportunity, to make diligent search where ever they come, and then justly to report what they observe: he puts these Instructions into the hands of Persons that go abroad, and Travel to all parts of Asia, Africa, and America, as well as of Europe, and the nearer parts of the World, intreating that they would carefully observe whether things stand in those remote Countries, as they do here at home, and as he hath set forth, or not; than which nothing can be more equitable and fair. And by this also, it may appear with what Diligence and Application he prosecutes his Larger Work; he endeavouring that all places of the Earth may be duly Searched and Examined, that so that Work may be the more perfect and compleat, and the less subject to Errors and Mistakes.

A 4.

Per-

The Preface.

Perhaps, my Defence of the Doctor from the charge of Plagiarism will appear wholly needless to those who have been conversant in these studies, and tedious to others; and truly I wish I could have brought it into a shorter Compass. But I found I could not possibly do that if I stated the Case fairly, and represented things as they really are; so many Authors having Written, and so many Conjectures having been proposed about these matters. I had also in my thoughts that it might not be unacceptable to the Curious to meet here in so little a Room the Chief Heads or substance of what hath been advanced on these very entertaining and important Subjects. Upon the whole I doubt not but the unprejudiced Reader will be satisfied that 'tis very unjust to accuse Dr. Woodward as a Plagiary from Steno, and the other Authors mentioned by L. P. since he must needs see how different what the Doctor hath brought is from theirs, as well as on how much surer Arguments it depends. And certainly it cannot but redound to his Credit to have retrieved such great and weighty Truths at last, after they had so long baffled the utmost endeavours of so many, and several of them, so considerable Persons.

I think I need make no Apology for my Manner of treating of L. P. Such bold and
yet

The Preface.

yet awkward pretenders to Philosophy deserving rather to be exposed and ridiculed, than solidly refuted. But however where there is any thing of weight or moment brought by him, I have given it its due consideration and regard; and I have been so serious with him where I judged it proper to be so, that any one may see I could have been so throughout had I been engaged against an Adversary of worth. I thought also that the Pleasantness of a Few passages in it, might give this Tract an Admittance, where perhaps (such is the Levity of some Mens judgments) a more severe and solid Discourse would lose the Justice of a Perusal.

If what I have done may be any way serviceable to shew the weakness and meanness of such Pretensions to Reason and Philosophy as oppose things Divine and Sacred: or to vindicate a Book that is abundantly qualified to propagate True Philosophy, (which was the Design of it) and at the same time to support the Authority of the Sacred Writings, I have my End, and shall think my small pains sufficiently compensated.

THE

THE CONTENTS.

Remarks on the two Essays, &c.

OF the Author of those Essays : he falsely assumes the Name of L. P. Pag. 1. & seqq. his Design and Principles, p. 5, &c. again, p. 14, 15, 44, 45. His unwillingness to be charged with Atheism, p. 10, 62 to 65, 67 to 72. The averseness of some Writers to Christianity, and their propensity to Paganism and Idolatry, p. 11, 12.

L. P.'s Stupidity and Ignorance, p. 7, 42, 43, 112, 119, 123, 127, 128, 135, 136, 137, 140, 141, 142, 149, 212, 213, 216.

The Fossil-Shells, &c. not repositied in the Earth at the Creation, as Mr. Ray conjectured, p. 16, 17.

L. P.'s False Citations of Authors, p. 17, 18, 19, 83, &c.

His objections about the Order of the Subsidence of the Metalls, Minerals, Shells, &c. at the Deluge, answer'd, p. 19, & seqq. to p. 23. and again, p. 30 to 42.

Of the Cornua Ammonis, p. 23.

Of the Shell-Fish at the bottom of the main Ocean, p. 24, 25, 26.

Of

The Contents.

Of the Dissolution of the Earth at the Deluge. Dr. Woodward does not ascribe this Dissolution to the Water, nor to any Menstruum, p. 26. Proofs of the certainty of this Dissolution, p. 27, 28, 29, also p. 217, 218. The Shells, &c. being not dissolved, no Objection, p. 29, 30.

Changes in the Earth, and Minerals since the Deluge, p. 39, 40, 41.

L. P.'s Objection about Coral adhering to the Fossil-shells, answered, p. 42.

His gross misrepresentations of Dr. Woodward's Opinions, p. 26, 43, 44, 55.

Dr. Woodward's Account of the Time that the Deluge commenced exactly conformable to the Mosaic p. 43.

L. P.'s Contradictions, p. 45, 46, 48, 49, 50, 51, 52, 78, 87, 88, 140, 144.

He asserts in opposition to Moses that there was no universal Deluge, p. 45. 47. 48. 60. 61. 144. 145.

He will have the shells found at Land to be nothing but Stones, p. 46. this consider'd, p. 47, 48, 50, 56, 57.

He asserts the Equivocal generation of Insects, p. 48. 49. though he allows that Opinion tends to Atheism, p. 50.

Of the shells pretended to be found lodged in the Glands and other Parts of Animals, p. 49, 225, 226.

L. P.'s Insincerity, p. 1, 2, 52, 53, 54, 83, 97, 98, 99, 157, & alibi passim.

His Objection about the Quantities of Trees, Bones, &c. dug up at land answer'd, p. 54, 55, 56.

Of his declining to treat of the Origin of Springs : and the Generation of Fossils, p. 58, 59.

L. P.'s

The Contents.

L. P's. Injurious treatment of Moses, p. 62, 63, 64, 65, 145.

Of Dr. Woodward's Discourse about the Migration of Nations, the Origin of the Americans, and of the Negroes, p. 65. 66.

L. P's impious traducing and exposing of the Holy Scriptures, p. 67, to 71.

He desires an Apology to be wrote for those who are accused of Atheism, p. 72. 73.

His trifling and ridiculous account of the State of Learning, p. 74. 75.

He confounds the shells with the stones moulded in them, p. 76.

Dr. Woodward's Account of the Conchitæ, &c. just, p. 76. 77. His Proofs of the Reality of the Shells, convincing, p. 77.

All Insects proceed from Eggs, and Plants from seeds, p. 77. 78.

Dr. T. Robinson's Account of the Origin of Insects, p. 78. 79. and of Truffles, p. 72, and 80. as also of the bringing the shells to Land by Monkeys, &c. p. 50. 51. and the Circulation by the Sun, the Sea, and the Hills, &c. p. 59.

Of the stories of Toads, and other Animals found alive enclosed in solid stone, p. 80. 81. and of Worms in the Bodies of Animals. ib.

Of the Destruction of the Fishes at the Deluge, p. 81. 82.

L. P's. Objection against the Dissolution, &c. from the Mountains mentioned by Moses in the Hist. of the Deluge, answer'd, 82. 83.

Of the shells in the Hills of Patagonia in America. p. 83.

The Fossil shells, that we cannot now match with marine ones, are real, and came from the Sea, p. 84. 85.

L. P's. Pedantry, p. 87, 88, 121. Re-

The Contents.

Remarks on the two Letters, &c.

These Letters are from the Author of the foregoing Essayes, though under another Sham Name, p. 97, 98, 99, 106, 107, 125, 131, 136, 146, to 149.

The Epistoler's Respect and Tenderneſs to the Essayer, p. 99, 100, 106.

He quits his Objections to Dr. Woodward's Opinions, being Conscious of the Truth of those Opinions; and betakes himself to a New (though groundless) Artifice, charging the Doctor with having taken them from Steno, and other Authors, p. 101, to 107, 112, 113, 139.

His Objections about preserving the Animals in the Ark, p. 104, 105.

About the Fossil-Salt, 107, to 110.

About the Nails and Bolts of the Ark, 110, 111.

Mr. Ed. Lhwyd's Arguments against the Reality of the Fossil-Plants answer'd, p. 113, to 119.

L. P's Knack at Postscripts, and after-fetches, p. 119, 120, 121.

His Antipathy to Moses: and to Dr. Woodward for defending of the Sacred Writer, p. 122. 123.

The pretty turns and peculiarities of his Stile, 124, 125, 131, 141, 142, 143, 148, 160, 161, 216.

His notable Difficulties about the planting of America, &c. 125, to 128.

His pleasant Account of the Giants Cawsey in Ireland, p. 129, to 132.

The

The Contents.

The meaning of Petrifications amongst some modern Criticks, 132, 133.

L. P's. Comical Account of his Irish Petrifications, 133, to 140.

His Shell-stones, Pectunculites's, and the other Monstrous Rarities in his Collection, p. 134. His Toad-stone or Stone grinder, 135. The stone that is a fishes Tooth, p. 136. Fossil-Trees of the Mushroom-stone, 136. 137.

His Talent to Criticizing, *ibid.* to Geography p. 137. His judicious rangeing of things, 142. His Literature, 143. His Logick, p. 7, 76, 88, 144. His profound Subtily, 146.

His weighty reason why he thinks the Earth not dissolv'd in the Noetick Deluge, 144.

His Mock-Skirmish, 146. 147.

A notable Reason why the shells were not dissolv'd as well as the stones, &c. 148. 149.

A word of Advice to Mr. Robinson, &c.

MR. Robinson's Account of things as repugnant to common sense, as it is to the Mosaic Account, p. 152. He understands not the Subject he writes on, any more than he does the Works of Dr. Woodward or the other Authors that have treated of it. His clumsy and affected Expressions, &c. 152, 153, to 156.

The Additional Remarks before Mr. Robinson's Book wrote by L. P. p. 156, 157, 160, 161.

The Design of these Remarks to asperse Dr. Woodward as a Plagiary, in taking his Notions from Columna, Dr. Hook, Steno, Scilla, and other Authors, p. 158. to 161. *Of*

The Contents.

Of the late Abstract of Scilla's Book, p. 160.

Dr. Woodward vindicated from the Aspersions of Plagiarism, 161. & seqq.

A consideration of the several Authors alledg'd by L. P. And first of F. Columna 161. His Arguments for the Reality of the Fossil-Shells, &c. consider'd, p. 162. 163. Dr. Woodward far from having any need of his Assistance, p. 164. 165. How Columna thought them brought to Land, 166.

Dr. Hook's Arguments consider'd, 167, to 172.

N. Steno's Attempt to prove the Shells, &c. real examin'd, 172, to 193. How he imagin'd them brought to Land, 194, to 196. His Account of the Causes of the Deluge consider'd, 197, to 200. Of the Origin of Springs and vapours, 200. 201. He knew nothing of the Dissolution of the Earth, &c. 201, to 205. How he thought the Strata form'd, 205. 206. Of the Subsidence, &c. 207. He had no Notion of its being according to Specifick Gravity. 207. to 210. Of the formation of Mountains, 210. 211. Of the Fissures of the Strata, 212. 213. Of the Fossil-Plants, 213. Of the Impressions of Shells on Stones, and Stones moulded in them, 215. to 218. Steno's Errors and Defects, 219, to 222.

Ag. Scilla's Reasons why he believed the shells real, consider'd, 222, to 226. He neither knew nor cared how they came to Land, 226. to 230. He is far from asserting that the subsidence was according to specifick Gravity, 230 to 238. He knew nothing of the Dissolution, 239.

Of P. Boccione, 239 to 242. Dr. Grandius, 242, to 245. Dr. Ramazzini, 245, to 252. Mr. John Ray. 252. 253.

Mr.

The Contents.

Mr. Ray's Difficulties [in his Pref. to his *Synopsis Stirp. Brit.*] relating to the Fossil-Plants, clear'd, p. 253, to 256.

L. P's Charge of Plagiarism upon Dr. Woodward wholly without any manner of ground, p. 256, to 258, also 269, 270.

Columna, Steno, Scilla, &c. so far from having evinced the Reality of these Shells, that they were universally believed to be not real till Dr. Woodward wrote: Nay there were several Authors who wrote professedly against Columna, Steno, &c. to shew their Arguments for the Reality of these Bodies were not conclusive, p. 258. 259.

Dr. Lister particularly argues most vehemently against Steno that these Shells are meer Stones, formed in the Earth, and never were any Part of an Animal. How he thinks them form'd, This a little tenderly consider'd, p. 259, to 266. Of the same Opinion were Dr. Plot, Reiskius, and other Authors, p. 266, to 270.

Of Mr. Edward Lhwyd, p. 266, 267, 268.

ERRATA.

Page 4. line 19. for *Adventure* read *Adventurer*, p. 9.
l. 1. for *he* r. the aforesaid Gentleman, p. 79.
l. 6. dele. p. 107. l. 19. for *the* r. that, p. 112. l. 28.
for *way* r. was, p. 122. l. 15. for *pretends* r. pretended,
p. 169. l. 19. for *Centre* r. Central, p. 239 l. 22. for
Co si r. *Cosi*, p. 175. l. 15. for *ralves* r. valves.

R E

[1]

Remarks upon the Title.

THOUGH there may be good Reasons why a Writer should sometimes conceal his Name; yet I think there can be none why he should falsify it, at any time. And therefore if L. P. are not the true Initial Letters of our Essayer's Name, and if these Essays were not sent in a Letter from Oxford, as is in the Title-Page pretended, Both which I have good grounds to believe; it will bear very hard on our Author's sincerity, and plainly intimate, that he had some bad Cause to support, and some sinister designs to propagate, which he was ashamed Barefaced to appear in. It's probable therefore that this lurking Author (if I may call him an Author who is such a Patcher together of other Mens Arguments) was induced to put this Cheat on the World for one of these Two Reasons: Either because he judged some things he had said here to be too loose and precarious to be publickly owned; or that his own Credit and Reputation was

B not

not Basis enough to fix on and abide by.

If the former were his Inducement to conceal and falsify his Name, I think he was much in the right on't: And 'tis great pity, that when he was so lucky as to make this discovery, he had not also found out that it had been better *never* to have *published* these *Essays* at all. However I'm sure 'twas very disingenuous to lay that Brat at a Poor *Oxonian's* Door, which he was afraid or asham'd to Father himself.

But if the latter consideration thus influenced him to act *Incognito*, 'tis a greater Argument of his *Modesty* than his *Judgment*, that he should expect the sham of a *Letter from Oxford*, and directed to a *Lord*, would give that Pamphlet Credit and Reputation, when its innate worth was not able to do so. For *L. P.* might have known that the World of late Years is grown as sick of an Anonymous Pamphlet, directed to a *Lord*, as 'tis of a Play or Poem pretendedly written by a *Person of Quality*. And we are nowadays so kind, or rather just, to the Merit of Persons of *Rank and Nobility*, to believe all such Trifles to be the abortive Issue of some dabling Wretch, that thus shrouds himself under the *Umbrage*
or

or *Patronage of Quality*: And all know *Dick Baldwin* is ready to help such a *Scribler* out at a dead lift.

But let the *Book* shift for it self as it can: *L. P.* is resolv'd it shall not want for *Title*. He knew a great many in *this Age* would be very much pleased with a Man that could discover some Errors about *Moses's Creation, General Flood, and the Peopling of the World*. Especially when it was to consist of *two Parts*, too; and these so accurately divided as to contain full fourteen whole Pages a piece: For thus a person of the *right Stamp* might be able to Baffle *Old Moses*, without, what is his *Natural Aversion*, the Fatigue of *Study and Thinking*. But the Mischief is; When *L. P.* comes to treat of *these*, of the First, *viz.* of the *Creation of the World*, he saith nothing at all: of the Second (*i. e.*) the *General Flood*, very little to the purpose; and about the last, *viz.* *The peopling of the World*, puts a downright Trick upon us; and foisting in the little word *New* before *World*, tells us only that it cannot enter into his Noddle how *America*, all the World it seems that he knows, came to be peopled?

His Title to the second Essay is pompously set forth also with a pretence;

not only of discovering the *Rise, Progress, and Destruction of Fables and Romances* (things it seems that *L. P.* hath much studied) but also to give the World an Account of the *State of Learning*, forth; but we shall see when we come to examine it, that he tells us, as I fear he knows, *very little of the Matter.*

Remarks on his Apology.

Page 1.

L. P. begins his *Apology* for his *Essays* with acquainting his feigned Lord, *That the Universal disposition of this Age is bent on a Rational Religion, and that Fierceness and Biggotry is in good measure calm'd and allayed.* Which is very good News if it be true: and I heartily wish *L. P.* were bent upon it too, and that *fierceness and Biggotry* were allayed in him also. But I fear our *Adventure* is not a little tinged with *both*. However he tells us, he will sail out on the *Pacifick Sea*, and hopes to gain his Port without any Storm or hardship. Well, Sir, if you will be rambling, a good Voyage to you! But I wish you understood your Compass, better, and had a little more Ballast before you venture that little tottering Cock-Boat of yours to the Waves. But Whip! he's gone I see, Top-sails a Trip!

a Trip! all Caution comes too late. For from the right Course of a Rational Religion, he is got into the New Latitude of Liberty and Natural Philosophy already; & is falling foul on the Rocks of Copernicus, Galileo, Campanella, Mersennus, Gassendus, Cartesius, &c. and what is worst of all, doth not perceive any danger neither! For who would think, that a Man that set out so fairly on the *Pacifick Sea of a Rational Religion*, should so soon deviate as to esteem a Man never the worse Christian, for contradicting the Scriptures, those sacred writings that establish Christianity. P. 11. He saith indeed that Copernicus, and the other Authors he names do so, and I perceive, likes them the better for that, but he doth not prove it; and I hope no one P. 2. will believe him on his bare word; for I could easily shew from the plain words of many of them, were it here necessary, that it is basely false. But he goes on, and saith the Sacred Writers spake (so he chooses to express himself) to men not famous in Arts and Sciences; and therefore they adapted all their sayings to the Vulgar Ideas: that their design was to teach them the True Theocracy and good Morals, and not the Natural Systeme of the World. What then! doth it follow therefore that they imposed upon them, and told them

B 3

Lyes?

Lyes? It's quite a different thing to omit giving account of a Mater; or to do it only summarily and in general, and to do it falsely and precariously, as some indeed have boldly asserted, and I perceive L. P. thinks Moses hath done in his *History of the Creation and Deluge*; though neither *They* nor *He* can ever prove that. For whoever looks into it with a careful and unprejudiced mind will very clearly see, that though it were not the *Great Author's* design primarily to teach the *Jews Philosophy*, yet he hath no where delivered any thing that contradicts the *Phenomena of Nature*. As to what L. P. saith of the *Calumnies* that have been cast on the *Worthy Master of the Charter-House*; I need only remark, that the *Master* knows whom to thank for them, and no doubt will own himself very much obliged to L. P. for the Company he makes him keep; in placing him thus, between those whom, he saith, contradict the *Scriptures* on one hand, and *Hobbs*, that *Unphilosophical Asserter* of a *Corporeal Deity*, on the other. By which, as others of such loose principles have done before him, he sily endeavours, to calumniate him himself; And therefore L. P. (as *Dr. Burnet's worst Enemy*) ought to be as much ashamed of so abusing

ing one whom he pretends to commend, and whose *Learned Works*; all that have the Honour to know him, are sure, were never intended to propagate any such *Principles*, as L. P. and his Gang discover themselves to be governed by: as he may be of the *Nonsense* he is guilty of in expressing it; for who can make any other of these words; *Pieces of Admirable workmanship, which his Enemies may be ashamed of, as some were on the discovery of the Antipodes and New World.* P. 2.

Next L. P. tells us boldly, that the *Philosophic History of the Bible* is not always to be embraced; and gives us this substantial and weighty reason for it, (as we must conclude from the causal conjunction [For] which ushers in what follows) For, says he, what an Out-cry against Mr. Hobbs because he described the *Deity as Corporeal*, though (as L. P. daringly saith) *Moses and the Scriptures had done so before him.* Now 'tis a ridiculous falsehood to assert that *Moses and the Scriptures* do describe God as *Corporeal*; since the direct contrary is declared. *Deuteronomy* 4. 12, & 15. *Ye saw no manner of Similitude*, *John* 4. 24. *God is a spirit*, *2 Cor.* 3. 17. *1 Tim.* 6. 16. *Whom no Eye hath seen, nor can see.* But suppose they had, one would think

that should be an Inducement to our Author to embrace such an History: where *Moses* and *Mr. Hobbs* jump so luckily together! for it will appear plainly by the through perusal of these Essays, that *L. P.* is one of those *qui Veritatem metiuntur, aut aestimant, non rationum Pondere & Momentis, sed Affectibus abrepti, aut praedudiciis occacati, &c.* As he Learnedly concludes 'tis the humour of the English to do; by which he as Scandalously abuses the whole Nation, as a Certain Gentleman (whom perhaps *L. P.* may know a little of) hath done Our Ministers of State: who in the Introduction to *Sr. John Narborough's Voyage*, which he humbly condescended to scribe for the Bookseller, saith, that the Promoting Arts and Sciences, with Treasure, is a Secret, which some Ministers think not fit to practise, or perhaps may be insensible of, for want of Penetration. Which is very near a kin to what *L. P.* saith, p. 39. of this Pamphlet; viz. That The true Philosophy in England begins to degenerate into Gossiping and Tale-telling, for want of a *Richelieu*, or a *Colbert* to put the Wheels and Springs in motion: A Reflection on our Superiours as base and Spiteful in meaning and design, as the Manner of expressing it is affected and ridiculous.

lous. Not but that he is, since that, veer'd about, as we see from his late Introduction to the English Translation of *P. Le Comte's Account of China*, which he says, he thought necessary to spin out purely out of good will and complaisance to the Booksellers. For he still goes on in his lowly Office of Spinning under them, for want of other Employ. In this he tells us he is sure there is a vast wit and genius in our Ministry capable of the greatest Enterprize, Nil desperandum;---talking much of the Growth and propagation of Letters; a fresh Circulation and a New Life in Nature. I confess I was a little wondering at the Change, but I discover'd by conferring another Passage of this Introduction herewith, that finding Philosophy turns to little Account with him, he's now setting up for a Politician, and this was put in meerly, to give it in his own words, to flatter ambitious Powers, to raise private Fortunes, or favour particular Factions: as all that ever he had wrote before was to ease an Hypochondriack Spleen, for so he affects to speak, to let us know that his Spleen is in his Hypochondres, and not in the Nape of his Neck; whereby we see his Skill in Anatomy is exceeding great as well as in Oratory and Panegyricks. For the Scrap of Latin in the tail, 'tis out of
Old

Old *Lily's Grammar*. But rather than not have *an End*, or two of it, in each of his *noble Works*, he'll plunder, not only *that*, but even *Cato*, *Corderius*, and the *Sententia Pueriles*.

L. P. closes his Apology with assuring us, that his Lord knows him to be *well-affected to the Church of England*, and *not in the least tinctured with Atheism*. I hope my Lord hath better reasons for his Belief of this matter, than L. P. hath thought fit to *publish to the World* in these *Essays*; of which more by and by. And since he hath already told us, *that the Best Philosophers contradict the Scriptures*, and *that the sacred Writers described the supreme All-wise, and all Powerful Being as corporeal*; and *that the Philosophic History of the Bible is not always to be embraced* (that is) *believed*; I say when one considers this, it is enough to make one suspect, he had *conversed at least with some of those Invisible Gentlemen*, or read some of the Books of those which the *World* calls *Atheists*: And 'tis really a great wonder, that an *Inquisitive Man*, as L. P. would be thought to be, and a great *Traveller* too, should never in all the *Countries* he hath gone through (no not in *Italy* it self) meet with one *Atheist*. But I'm afraid,
L. P.

L. P. cannot see wood for Trees, and that his Brains stand not the same way with those of the rest of Mankind; since he can think those that assert God Almighty to consist of dull and unactive matter, and that say he hath even in the *Sacred Volume* of his Will, imposed *False and unphilosophical Stories* upon us, to be *Men of a more than ordinary Zeal and Veneration for the Supreme, All-wise, and All-Powerful Being* *. But these *Gentlemen*, and all who are *Enemies to the Holy Scriptures*, are much in favour with this Author, and others of his strain. And this Humour prevails so far with them, as to make them fond of even *Paganism and Idolatry*. Witness the *Extract of the Hort. Malabaricus*, wherein the *Theology and Politicks of the Indians* are highly commended, as so well mix'd and depending upon one another, that they may in probability hold to the *Worlds End*. And the same Author in his late *Introduction to P. le Compte*, goes higher yet, and will not have the *Missionaries* trouble themselves any longer with *propagating Christianity in China and the Indies*: or think that *that* shall ever *universally prevail*: or expect from *Heaven* a *general uniformity in Religion*; since the *Harmony of the Universe consists in variety*, and God always
has

* See p. 2, 3, and 4, of his Apology.

has, and ever will be worshipt in differen Forms, and under various Figures and Ideas. As sometimes in Form of an Ox, which the Ancient Egyptians worshipt; as they did Monkeys, Crocodiles, Leeks and Onions: Sometimes in Form of a Cow, adored by the Modern Indians, whose Theology the Introducer extolls so much: or in an Image of Wood or Stone. And it seems, he says, to be a general Error amongst us, that many wise Nations adore meer Stocks and Stones, without any respect to the Supream Divinity. Now if they have but that, 'twill bring them off safe enough; they may worship Stocks, and Stones, and Cows, as long as they will, nor need they care a Fig for Christianity, or the Gospel: Turks, Pagans, and all others are secure, and indeed in the right, if it be the Will and pleasure of God to be worshipt under various Figures and Ideas. And this is one of many Instances that might be given of the more than ordinary Zeal and Veneration these kind of Authors have for the Supream Divinity: and how well they stand affected to the Church of England.

I omit descanting on L. P's. merry conclusion of this Apology, where, by a happy way, which is peculiar to him, he jumbles Imaginary Castles in the Air,
and

and Don Quixotte's two real Windmills together, since such Absurdities are so common with him, that it were endless to take notice of them all.

Remarks on the First Part of the First
ESSAY.

L. P. tells us at the beginning, That the Common History of the First Chaos, of the Deluge (which here, as in the Title Page, he owns to be Universal) and the peopling of the Old and New World, is so well known to every Body, that he thought an Account of them would seem unnecessary: especially, saith he, to your Lordship, who has read so many Excellent Writers upon them, as Judge Hales's Origination of Mankind, Dr. Burnet's most Ingenious Theory, Mr. Ray's Three Phys. Theological Discourses, &c. Now if these things be already so well known, that any farther Account of them is unnecessary, what need L. P. trouble his head about them? For either the Authors he cites have given a good and sufficient Account of them, or they have not.

If they have not; why doth he stile them Excellent Writers, (p. 1.) and call
Dr.

Dr. Burnet's Theory, a Piece of Admirable Workmanship, which his Enemies, of which he I hope can be none, may be ashamed of, as some were upon the Discovery of the Antipodes, and the New World? (Apol. p. 2.) and why doth he make such great use of Mr. Ray, throughout these Essays? of which more by and by. But if these Authors have given the World (as he seems here to intimate) a just and Philosophical account of the First Chaos, Universal Deluge, and the Peopling of the World; why doth he brand the things they deliver with the odious Titles of Monstrous Traditions, Hypotheses invented in Cells, and which have (he saith) infected the purity of Nature with Fables, Chimeras, and Romances? and why does he charge Moses and his Defenders with having made use of God Almighty Himself on all Occasions, to invert and confound his own settled order of Causes, and to commit absurdities in Nature, either to make good an uncertain Tradition (i. e. the Divine History of Genesis) or to corroborate a vain Fancy. Is not this fine Inconsistent stuff? But here L. P. plainly discovers himself, and his Design: When he thinks an Author contradicts the Mosaisk History, by any means enervates the Credit of the Sacred Writings, and endeavours

P. 2.

vours to prove them Unphilosophical and absurd; he most liberally bestows the Titles of Most Admirable, Excellent, and Ingenious on him: But when on the other hand he meets with one that does any ways establish, strengthen, and support the Authority of Scripture, and shews that the Accounts there given of things are agreeable to Reason, and the Phenomena of Nature; then strait he derides his Hypothesis as a Monstrous Monkish Tradition, a Fable, Chimera, and Romance; and Thumbs o'er his Common-place Book to find Latine stuff to abuse him in: And as Men give Nick Names according to the Books they read, Company they keep, or as they vary in their Dreams and designs, as he observes, So he also calls him all to naught in some foul words he had formerly filched from Cicero. But to come close to the Point, as L. P. saith, We have been told of old (that is by Ovid in his Metamorphosis) That all things were mingled in a fluid Chaos, at the first Creation, and that in process of time there came on gradual Sediments and Separations, and that concreted Mass which we call the World. And this, he tells us, made some great Philosophers (but cites only Mr. Ray in the Margin) conclude, That the Shells, Teeth, and other Bones of Fishes, were

P. 3. of his Apol.

P. 2.

were embowelled in the Beds, or Strata of the Earth, on the gradual or leisurely separation, or draining of the Waters after the first Creation.

p. 3.

Here I observe these things: First, That L. P. now 'tis for his Turn, grants that the Shells, Teeth, and Bones, found so plentifully every where at Land, are really such as they appear to be. Secondly, He grants also, That the Earth doth consist of such Strata, or Beds, as look like the Sediments of Water. Thirdly, That as he names but one of these great Philosophers which were of the opinion, that these Exuvie of Animals were left thus at the first Creation, so he Abuses Mr. Ray in saying, that he concludes they were left there at that Time. For Mr. Ray proposes it only as a present Conjecture (See the half sheet after p. 162. of his First Discourse) and I question not is now of another Opinion. For as 'tis impossible to imagine how the Shells, Teeth, and Bones of Fishes, could ever get down to such vast depths, as we find they are every where at land, by the way he proposes, and entomb themselves in the Bodies of Solid Stone: and that Trees, Plants, and the Bones of Land-Animals dug also out of the Earth, should be left there, where they could
not

not grow nor subsist; so likewise the way he proposes for their being left there is directly contrary to the Account Moses gives of Things; and this I know will go a great way with Mr. Ray, whatever it will do with L. P. Now the Text saith plainly Gen. 1. 9, 10. That the third day the Waters were all gathered together from off the Earth into one place, which is there called the Sea: and therefore it cannot be rationally conjectured by a Man that believes the Authority of the Scriptures, that the Waters were many Years in going off the Earth: and that at the first only a little spot where Adam dwelt was dry. But what is worse than all this, and doth effectually refute this vain opinion; the Fishes of the Sea, and of other waters were not made till the fifth day; as is very plain from Gen. 1. 20. which was after the Waters had betook themselves to their appointed place. But L. P. goes on, and saith, that we have been assured by others, and for it cites Steno, Hook, Ray, and Plott, that these Marine Bodies were left here at the Universal Deluge. But here, as he exposes his own Ignorance, so he again abuses Mr. Ray, in making him conclude but six lines before, that these Shells, &c. were left thus in the Earth at the Creation, and now to assure us
C they

Page 3.

Microg.
P. 111.

vid. word
of advice
to Mr. Ro-
binson.

they were so deposited at the *Universal Deluge*; which Mr. Ray does not any where assert. Nor doth Dr. Hook assure us that these Bodies were thus left in the Earth at the Deluge; he only concludes in the general, *that they were left by some Deluge, Inundation, Earthquake, or some such other means*. Dr. Plot's Opinion is, that they are *meer Stones*: that they never belonged to the Sea, or were brought by any *Deluge*, but were formed in the very place where we at this day dig them up; all which in his *Natural History of Oxfordshire and Staffordshire*, he endeavours to make out by many Arguments. As to Steno, 'tis true he thought them *Shells*, but does not prove it. He was likewise of Opinion that some few of these *Shells* were Relicks of the *Deluge*, but offers no *satisfactory Argument* of that: and for the rest, he imagines some of them generated in the very places where they are now found: that others were brought to Land at several times by *Inundations of the Sea, Earthquakes, and Eruptions of Mountains*; of which more hereafter. So that 'tis plain here L. P. is grossly mistaken in the sense of the Authors he quotes; which Error if he take it ill that I thus expose, I will for once beg his Pardon, and believe he did it wilfully, out of

of a good pious design to shew, that a certain worthy Gentleman that he bears great good will to, and who hath effectually proved that these are real *Shells*, and were left thus at the *Deluge*, did not light on those proofs himself, but stole them from the Authors above-mentioned, and some others, which L. P. mentions in another place.

But pray let us go on and examine the matter of fact, as L. P. desires, Physically, Mechanically, Experimentally, and by the Laws of Hydrostaticks. He is now in a very good humour, and grants that the *First Chaos* (I hope he means the Creation of the World recorded in the First of Genesis) and the *Universal Deluge*, might be miraculously brought about. Very good! Sir, I thank you heartily, let us see how far this will go. If the *Deluge* were *Miraculous*, all the management of things then must needs be immediately in the hands of God; and therefore if any thing should have then proceeded contrary to the usual course of Nature, it would not have been the Result of God's confounding his own Laws, as L. P. calls it, but only so supernaturally determining, suspending, or disposing of them, as was agreeable to those Great Ends he had then to carry on; and which L. P. grants

grants were *miraculously* to be brought about. Such an effect Dr. Woodward shews the bringing on of the Water at the Deluge to have been : as also the Universal Dissolution of the Earth which then happen'd, a thing which sticks so hard in L. P.'s Throat, that he will never swallow it down ; and therefore he now proceeds, you must know, full *Hydrostatically* to refute it. Says he, *if all the solids had been dissolved, and floating and subsiding (i.e. Swimming and Sinking) in the great Fluid of the Abyss at the Deluge ; the most ponderous must subside first and fall deepest, and the rest in their order, according to their specifick weights : And then would the Metalls have been lowest, &c.* Why ! so it would have been, had God Almighty thought fit, and had it been suitable to those Great Designs he was then bringing about. But a Man that believes the Deluge Miraculous (as L. P. doth) may also believe, that God might otherwise order matters, and suspend the usual Laws of this subsidence of the Metalls and Fossils at the Deluge, in what proportion would best square with those Intentions he had in the Re-Formation of the Earth after the Flood. The Ingenious Gentleman, I last mentioned, hath in the 217th Page of his Excellent Essay, promised

Nat. Hist.
of the
Earth. Part
2. and 3.

P. 4.

Vide p. 4.
circa fm.

mis'd to assign a Reason why Metalls and Minerals ly sometimes so near the surface, and did not (because of their greater Gravity) at the general Subsidence in the Deluge fall to a much greater depth than we now find them. This Promise, how able he is to make good, both my self, and several others, who have conferred with him on this Head, know very well. Nor need I here go about to anticipate him in the Performance. The truth is, any one, that hath Application enough to compare, what he hath already delivered in different Places of that Essay, need not be far to seek for that Reason. But L. P. whose Talent, I perceive, is not Consideration, is in a terrible fright about this matter ; for he hath discovered, he tells us, *That the Metalls are oft at the top, Beds of Marble near the Superficies, Vegetables, Testaceous, and Animal Bodies lower still, and the Abyss of Water lowest of all.* This was such a fantastical Descent of solids in a Fluid, such an Un-Natural, Un-preternatural, and Un-supernatural Trick, as L. P. thought, that it scared him even out of all his seven Senses : for undoubtedly he was not in his Wits, when he read the 80th Page of the Doctor's Book ; for had he been himself then, he would have found that this was not the result

of a fantastical descent of solids in a fluid, but of a real Disruption of the Strata, after they were sunk, according to the Laws of Gravity, and consolidated. And whereas L. P. saith, p. 5. That the same Shells and Marine Bodies are found deep in Beds of Stone of different specifick Gravity; I say in the general, that 'tis a great mistake; and unless L. P. had cited some good Authority for it, or brought some instance of matter of fact, there's very little reason to believe him. Nor hath what he next mentions any weight in it, of Cockles and *Cornua Ammonis* being found on the very superficies of the Earth: For first 'tis false to say, as he does, that those Shells are the most ponderous; there being very many that are much more ponderous than these are. But the Question here is not so much which are the most ponderous, as which are of the greatest specifick Gravity. And it seems L. P. or whoever was his *Intelligencer* here, can't conceive a little shell to be heavier than a great huge one; nor shall any Hydrostaticks convince him, that a little lump of Gold, can be bulk for bulk heavier than a vast great piece of Cork. But though we should allow Cockles and the *Cornua Ammonis*, as they are really of the lightest, to be of the heaviest kinds of

of shells, yet neither will that make any thing at all to his Purpose. Dr. Woodward has shewn *, that the Shells which * p. 66. we find at present upon the face of the Earth, and 232. are principally of the heavier sorts, and given a plain and convincing Account of the Reason of it. After which a Man would hardly expect any one could be possibly so trifling, not to say stupid, as to make the finding heavy shells at the Surface, an Objection against what the Doctor hath delivered.

Then for his scruple, whether, the *Cornu Ammonis*, is any species of Testaceous Animal ['tis his usual Phrase, and the Reader will easily guess at his meaning] or not, † 'twill, I think, soon vanish, † p. 5. to any reasonable and unprejudiced Person, who will but calmly examin the Constitution of it. This I am sure that on many that I've seen in Dr. Woodward's curious Collection; and on some that I have now by me, there is a plain shell actually adhering to and enclosing the stony or mineral matter, which is moulded, or formed within it. And which puts the thing out of dispute, the Doctor hath real Sea-shells of that kind now by him, which I've more than once seen and compared with the fossile ones.

As to what L. P. next objects, *that 'tis hard to conceive, that there can be such broods of Shell-Fish deep in the bottom of the Sea, where (he saith) there is such want of Air and Food, and such a mighty pressure of Water sufficient to squeeze, and break much firmer bodies to pieces.* I reply, that 'tis very strange a thing so notoriously known, and certain, as the fact is, that there are Broods of Shell-fish at the bottom of the Sea, remote from the shoars, should be so difficult for L. P. to conceive; for any Fisherman that rakes the bottom of the Sea with a *Dragg*, or a *Traul*, can soon shew him great varieties of Shell-fish, so brought up. But the good Man is seized, of a sudden, with such a *fit of compassion* for the poor *Shell-fish*, who are doomed to live there without *Air and Victuals*, that he can hardly conceive any thing at all. Though why should he think they can't live there without Air? Did he ever see the Lungs of an Escallop, or an Oyster? And why is he in such a dismal taking for Food for them? Doth he think they can't live there without Bread and Cheese, a Pudding, or a piece of Neck-Beef? Pray, Dear Sir, go to Colchester or some such place, and ask how many Barrels of Pork, or Firkins of Butter, they give their

their Pit, or Cove-Oysters in a Year, to fat them! But the most dreadful thing of all is yet to come! He hath found out a trick to *spoil* all their *Eating*, had they never so much good *cheer* ready; for he that examines all things *Experimentally, Mechanically, and by the Laws of Hydrostaticks*, hath discover'd, that the mighty pressure of Water must needs break much firmer bodies than *Shell-fish*, and consequently quite ruine and destroy such poor tender young things. This indeed, for an *Hydrostatitian*, is a Noble thought, and will help us out to account for several strange things that have of late happen'd: as why our *Fishing-Trade* is not so good as formerly; which you must know is because the heavy Water hath kill'd and buried all the Fish; Hence we know also why the Plate-Fishing-Folks have given over, *viz.* because the Water hath *Squeezed* all their Dyvers to pieces: and for this weighty reason also we are sure never to have any more *Frogs*, for the weight of the Water will certainly squeeze the Guts of all the *Tad-Poles* out; as L. P. well remembers it did that which Mr. *Boyl* tryed the Experiment upon (*Vid. Hydrostatical Paradoxes, p. 244.*) An Experiment which 'tis strange a *Virtuoso* should not remember,

ber, or not understand; when he declares all things shall be examined *Hydrostatically*! And if he had read, and considered how punctually 'tis related, 'tis equally strange he should think, that the pressure and weight of the Water should squeeze and kill the Fish, armed with strong and firm Shells, when a very forcible, and more than natural compressure of the Air and Water in that Experiment, did not injure so very tender a Creature as a Tadpole.

r. 6.

But L. P. goes on, and says, perhaps the Water might be so kind, as to dissolve the Adamantine Rocks, Porphyry, Talk, &c. and to preserve, at the same time, her brittle Shells, and tender Plants, entire and whole, &c. What kindness the Water hath for L. P. I know not, but I'm sure Dr. Woodward desires none of its assistance to dissolve the solids at the Deluge: nor doth he any where so much as intimate, that the Water, or any Menstruum whatever, was the Cause of such a dissolution. But L. P. is one of those who, to give it in one of his own Ends of Latin*, *Sæpe etiam, ad concitandam invidiam, Authoris mentem aut verba in alias partes detorquent.* 'Tis enough for Dr. Woodward's Purpose to have prov'd *de facto* that the Stone, Marble, Metals, and to be brief,

* Apol. p.
4.

all

all the solids of the Antediluvian Earth, yea and the very Body of the Earth it self, were really dissolved, which he hath done effectually. Indeed that they were so, must I think needs be granted by any one that (to wave the many other Evidences of the thing which Dr. Woodward hath given) seriously reflects on the following Phænomena, viz. Sea-Shells that are incontestably real, fair, and perfect, and other heterogeneous Bodies, lodged in the Strata of Marble, Stone, &c. to the greatest depth we ever dig, or myne: and these lying according to the Laws of Gravity: the like Shells also inclosed and immersed in the Substance of the hardest Pebbles Flints, Pyrite, &c. others having their Cavities fill'd with Metallick, Flinty, Stoney, Sparry, and all other sorts of Mineral Matter: plain and indubitable vestigia, or impressions of all sorts of Sea-shells, &c. on Flints and other, even the hardest Fossils; and this in all parts of the World. This, I say, is sufficient to convince any reasonable Man of the certainty of this Dissolution: and the wonderful nicety and fineness of many of the Delineations and Impressions, shew that the said Fossils were in the most absolute and exquisite State of solution that could be. And this is what every Rock, every Quarry,

Quarry, every Mine, and every Gravel-Pit; in short, 'tis what the whole Face of the Earth attests. Nor do I know any one *intelligent Person*, that hath duly considered these *Phænomena*, that does not freely assent to this *Proposition*. 'Tis indeed a very great and *important one*, and we may the less wonder that L. P. envies Dr. Woodward the Honour of the *Discovery*. But since the Doctor hath assigned a very evident and convincing reason why *that Earth* was so dissolved.

* Nat.
Hist. of
the Earth.
Part 2.

* Since he hath shewn of how great *Benefit and use* that *Dissolution* and *alteration* of the *primitive Fabrick* of the *Globe* was and is to *Mankind*, in their present *laps'd state*: Since he hath *all Nature* clearly *attesting the thing*: and the better and more discerning part of *Mankind* assenting to the *Evidence*, he has offered, I think, he may very contentedly acquiesce, though there be some so cloudy and *short-sighted* that they cannot, and others so *perverse*, that they will not, see the *Proofs* of it. This I must say, that if *Ocular Demonstration* be convincing, the Doctor wants not that. He has now in his *Repository*, that vast variety of *Shells*, *Teeth*, *Bones*, and other *marine Bodies* lying in *Beds* of the *hardest stone*, in *Flint*, and other *Fossils* of all kinds; as well as shells fill'd with all

all sorts of *Native Minerals*, *Spars*, *Flint*, &c. *Impressions* on *Flint*, and other, like *Bodies*; enough to satisfy and convince even the most *Scrupulous* and *doubtful Enquirers*. And I am well assured, that some very *extraordinary Persons* that have come to look over his *Collection*, doubting of this *Dissolution*, have upon view of the things there been so fully satisfied, that they have pronounced it *plain matter of Fact*, declaring now they had even *Evidence of sense* for it; and that 'twas *impossible* it could have been otherwise. The Doctor therefore puts it beyond all *Dispute* that the *stone* and other *Fossils* were *dissolved*; and that the *shells*, &c. were *not dissolved*; now suppose he could not have given a *Reason* why *those* were dissolved and not *these*, what then? Must we straightways demur to what is *matter of Fact*, and abandon the *Evidence of our Senses*? Would not any one that should reject and refuse to read *Salust's History of Cataline's Conspiracy*, though never so excellent and well performed, because he had not also wrote the *History of Alexander the Great*, or of *Cleopatra* likewise, or what else came into his Head; I say would not such a one be justly reputed *Senseless* and *Ridiculous*? And as *Senseless* would it be to reject Dr. Woodward.

† Conf.
Nat. Hist.
of the
Earth. p.
108.

P. 6.

Woodward's Proofs of the Dissolution of the Fossils, because he has not also shewn *why the Shells were not dissolved*. But I must acquaint L. P. after all, that from some *Papers of the Doctor's on this Subject*, which I have had the favor to peruse, I am convinced that he will give the *Learned World full Satisfaction in this Point likewise: and assign a plain and Physical Reason why the mineral Bodies were dissolved, and not the vegetable and Animal ones* †. In the mean time 'tis rashly & injuriously done of L. P. to pass Sentence about a thing so peremptorily, which he was no judge of; the Evidences thereof being indeed not to be expected in a Treatise of that brevity as is *Dr. Woodward's Essay*: especially when the Doctor hath engaged himself to produce it in his *larger Work*: which I can assure L. P. goes on with all the Expedition so great a Design is capable of.

L. P. saith, *That 'tis hard to conceive leaves and light shells should fall in Equilibrio with the much heavier Parts of Marbles, Minerals and other Fossils, &c.* To which I answer, that 'tis very certain, *Leaves and Light Shells did not subside at the Deluge with, nor are they now generally found embodied in, the Strata of Marble, or Mineral Matter.*
And

And those *rare instances* that we now and then meet with of it are an *Irregularity*, which we may well enough suppose would here and there happen in the *great disorder* wherein things were at the *Deluge*; though generally speaking they did then *subside according to the Laws of Gravity*. Besides such a *Phenomenon* may be well enough otherwise accounted for, viz. from what *Dr. Woodward* hath, *Nat. Hist. of the Earth* p. 77. circa finem, and p. 182. where he shews, that *Metallick and Mineral Matter frequently affix'd to the Shells, and other Bodies, whilst they were sustain'd together in the Water at the Deluge; Which augmenting their Weight, they subsided sooner, and fell deeper, than they would otherwise have done: becoming by that means lodged amongst the more heavy Mineral Matter.* The same way likewise may we very reasonably account for the finding the *Fossil-Shells, or Shell-Stones*, he tells the pretty Tale of, *under Rocks of solid Stone: ay and the Crabs-Claws too that have been found lodged about six Fathom deep, upon the sinking of a Well**; I mean in Case that P. 7. Tale be true, that he, or whoever was his *Elegant Informer*, tells, for he produces no *Proof of the Truth of it*; and a bare assertion from one of his Principles deserves

† p. 6. deserves none the least Notice without Proof. And whereas he says † that the lightest shells on our shoars are the Echini, 'tis so gross a blunder, that all the Crustaceous ones are very near as light again, they being generally to Water but as 1 $\frac{1}{2}$ to 1, whereas the Echini are as 2 $\frac{1}{2}$, or at least as 2 to 1.

But that the vanity and groundlesness of these kind of Exceptions may the more clearly appear: and how little able this poor Scribler that talks so much of Laws of Gravity, of Hydrostaticks, and I know not what, is to pursue a Thought: or trace the Momenta of the Subsidence any farther than just Dr. Woodward hath led him by the Nose, and done the thing to his Hands; I shall, with the Reader's Leave, enlarge a little more on this subject. The Doctor hath shewn * that the dissolved Fossils, and terrestrial Matter, together with the Shells, Bones, and other animal and vegetable Bodies were all assumed up promiscuously into the Water at the Deluge and sustain'd in it: but at length all this Mass sunk down again in the Water, composing the Strata of Chalk, Stone, and the rest, where of the Globe now consists, falling according to the order of Specif. Gravity, the heaviest first and lowest, and the lighter in its turn, quite on to the lightest of all, which settling

* Nat.
Hist. of
the Earth.
p. 74, &c.

not

not down till the last fell at the Surface: that the heavier sorts of Shells, and other like Bodies, subsiding at the same time, that the sand and heavier matter did, became lodg'd in the Strata of Stone which that sand composed: and that the lighter sorts subsiding along with the Chalky and other light matter were reposed in the Strata of Chalk. This is the substance of what Dr. Woodward hath delivered in this matter. Now L. P. is so weak as to think, that if ever there be a heavy Shell found near the Surface of the Earth, or lodged in any lighter sort of terrestrial matter: or a light shell lying deep, and in Matter that is specifically heavier, it must needs overturn Dr. Woodward's Hypothesis. Whereas alas it does nothing like it. For though the Doctor from Observation, and from due Consideration of what happened at the Deluge, does assert, that for the main this subsidence was regular and according to the Laws of Gravity: yet he no where implies that 'twas universally so. So far from it that he expressly limits it, saying only that the Subsidence happened according to those Laws generally, and as near as possibly could be expected in so great a Confusion *. And indeed any one that shall

duly revolve the thing in his Mind, cannot but see there must needs be some disorder

* Nat.
Hist. of
the Earth.
p. 75.

D

order in the *settlement*, as things then were. Dr. *Woodward* hath in those *Sheets* of his *Larger Work*, which belong to *this Part*, so very clearly and handsomly adjusted the Matter, that I cannot do better than give it in his own words. "Tis not reasonable to suppose the *Shells*, or other *Marine Bodies*, before the *Flood*, lay, or the *Plants* grew, in any *set Form* or *Method*; or if they had, their being *born from place to place*, by the *Waters Motion*, would break and *discompose* it. And for the *Terrestrial Matter*, in what order soever it lay, the *intermixture* of the *Shells*, and other *foreign Bodies* with it, shews plainly, that order was *destroy'd* and *lost*. So that *all Bodies* whatever, both *Animal*, *Vegetable* and *Mineral*, whilst sustained in the *Water*, were *confusedly blended* and *mixt* with each other. 'Tis plain, we see, there could be no *Method*, nor *Order*, observed in the ranging of them there; but, in every part of the *Mass*, *Bodies* of all sorts, *heavy* and *light*, must be *confounded*, and *mingled* together, without any *rule* or *certainty*. There must be then as well *light Bodies* near the *bottom* of the *fluid Mass*, as *heavy ones* at the *top* of it; and consequently, when the time of that *Subsidence* was come,

" all

" all indifferently, as well the *light*, as the *heavy*, would make towards the *Basis* of the *Mass*. So that the *light Bodies* that then chanced to be near the *Bottom*, must of necessity arrive at it, and settle there, sometime before ever those *heavy ones* that happened to be above, at vast distance, in the *higher parts* of that mighty volume of *Water*, and even near its very *surface*, could have travers'd the whole *thickness* of it, and sunk to the *bottom*. Had they started fair, the *heavy* and *light* been equally distant from the *Basis*, and both began to fall down at the same-time, then without doubt the *heavier Bodies* would have reach'd the *bottom* first, and so have all lighted together, and constituted one or more *Strata* beneath the others. But we see the Case was much otherwise: and an *Echinus*, or other *lighter Shell*, that was within a *fathom* of the *Basis* when the *subsidence* first began, must needs reach it long before a *Concha*, or any *heavier* that was then a *mile* or more above it. 'Tis certain the *Echinus* would be disposed to sink, at least slowly, by its own, though lesser, *Gravity*. Besides, 'twould be push'd on and beat down by the continually repeated *percussions* of

D 2

" the

“ the other *heavier Bodies* behind, that
 “ must be incessantly *falling* and show-
 “ ring down upon it. This *Echinus* there-
 “ fore must be *lodged much deeper*, in the
 “ *Earth*, than the *Concha*, and *distanc’d*
 “ from it by a great deal of the *terrestri-*
 “ *al Matter*, that happened to be sustain-
 “ ed in the *Intervall* betwixt them. Af-
 ter this the Doctor proceeds to shew
 that this *Disorder* would not happen on-
 ly in the *lower Strata*, but likewise in the
upper, and those nearer the surface, tho’
 not near so frequently. The Reason of
 which must be plain to any Person that
 duly considers the matter, so that I shall
 not need to transcribe the particulars:
 especially since we may expect to have
 them when *that Work* it self is made
publick. In the mean time I cannot but
 note that the *order* of these Bodies is so
 far from affording any *real Objection* a-
 gainst Doctor Woodward’s *Hypothesis*,
 that ’tis a strong Confirmation of it.
 And indeed the *Fossil Shells* and other
 like Bodies are at this Day found ly-
 ing in a more regular manner than, all
 things rightly put together, could
 well be expected. The *heavier shells*
 are so generally found repositied in the
heavier sorts of terrestrial Matter, and the
lighter ones in the *lighter sorts*: those un-
 derneath,

derneath, and these above, that ’tis truly
 very considerable. Of this Dr. Wood-
 ward hath already given the World se-
 veral Instances: and will, in due time,
 give many more. He hath shewn * that
crustaceous shells, such as those of *Crabs*,
Lobsters, and the like, and the larger
Buccina, *Concha veneris*, & some others of
 the *testaceous* ones, as well as several o-
 ther Bodies that are *lighter* than *Sand* and
 the other ordinary Matter of the Globe,
 would not *subside* till after *that*, and the
 other *heavier Bodies* were sunk down:
 and consequently would fall, *after all*,
 upon the surface of the *Earth*; where, be-
 ing exposed to the *Injuries of the Air*,
Weather, and the like, they would in
 tract of time rot, and quite *perish*. And
 this is accordingly *attested* by *Experience*;
 these *very light shells* being so extreamly
rarely found, that some, of even the more
diligent, *Inquirers* into these Matters
 have asserted in Print that they are *never*
found. That indeed is not so; but yet
 I dare be bold to say that any Man that
 shall search, will, for *one of these Shells*
 find *ten thousand* of the *heavier sorts*;
 which must be granted is *great Odds*.
 And this is a most extensive and incon-
 testible *Proof* and *Evidence* that these Bo-
 dies *very generally* observed the *Laws of*

* Nat.
 Hist. of
 the Earth.
 p. 28. &
 seq. & p.
 66. & p.
 75. & seqq.

Gravity in their *subsidence*. But this is not the only Instance the Doctor hath already assign'd of this. For things being, as he shews, determined to that *subsidence* only by their *Gravity* * : and there being *Shells*, *Teeth*, and other like Bodies that were precisely of the same *Gravity* with *Sand*, *Chalk*, &c. they settled down at the same time that these did, and so fell into the same Beds with them, and became enclosed in them. Accordingly at this day we find in the † *Stone* which that sand constituted, great Numbers of *Sea-shells*, and these of different sorts, e. gr. *Conchæ*, *Pectines*, *Cochleæ*, but all agreeing in *Gravity*, both with each other, and with the *Stone* wherein they are lodg'd, they and that being in *Specific Gravity* to water * as $2\frac{1}{2}$ to 1, or thereabouts. Now though we find these *Multitudes*, and this variety of the heavier *Shells* in *Stone*, yet we hardly meet with ever so much as one of the lighter, e. gr. *Echini*, *Oyster-Shells*, or the rest. But then these, which are all to Water as 2 to 1, or a little more, are found very plentifully in *Chalk*, which is of the same *Gravity*; in which yet rarely, if ever, any of these heavier ones appear. For these, in such parts of

* Which to note that by the by is a proper Fluid to poize them in, and compare them unto; it being Water wherein they thus subsided.

the *Mafs* where there were any of them, subsided before, and so became buried in the *Strata* underneath the *Chalk*. This is another egregious *Testimony* of this orderly *subsidence*; and for this the Doctor hath appealed * to a mighty *Tract* of * *lb.p.31.* *Ground*: to all the *Chalk pits* of *Kent*, *Surrey*, *Essex*, *Hartfordshire*, *Barkshire*, *Oxfordshire*, and all others that he hath ever searched. And though I myself, and many other *Persons*, have been over and over upon these *Inquiries* since that was published, yet I do not know that in all this time there hath been found in *Chalk* one shell heavier or indeed lighter than *Chalk*: or in *Stone* any heavier or lighter than that is; more than which will not, I presume, be needful to be noted on the subject.

What hath been hitherto said relates to the *Original Condition* of the *Earth* and *Fossils* and their order, and subsidence at the *Deluge*. But there have been several *Changes* in them since that time, and whoever pretends to examine *Dr. Woodward's Hypothesis* must make *Allowances* for them. The *Strata* that at first were continuous and horizontal †, were afterwards broken, dislocated, and their situation varied, some being elevated, others depressed*, nay some quite revers'd, * *lb.p.80.*

and turn'd topsy turvy. No wonder therefore if *in such*, the more ponderous Shells be found at the surface, and the lighter underneath. What was the original Site of the Strata must be first found out: and then Judgment made of the Order of the Subsidence. But further the Doctor hath prov'd * there hath been a Migration and Transition of a great part of the finer Metallick and Mineral Matter that was originally lodged in the Strata of Stone, it being drain'd thence by the Water that arises out of the Abyss beneath, and is continually passing and straining through those Strata, in pursuit of its way to the Fissures and Intervals of the Stone; where 'tis discharg'd forth in Springs and Rivers upon the surface of the Earth. In which Intervals it deposits the greatest part of the said Matter that it so brought out along with it; bearing the rest on to the surface. Nay besides this (which is for the main in an horizontal direction as being in a Parallel with the Site of the Strata, and running along with them to the perpendicular Fissures which intercept them) the Doctor hath signified in express words that there is likewise another sort of removal of the Metallick and Mineral particles; viz. from beneath upwards, with a direction quite contrary to that

* Ib. p.
188. &
seqq.

that of the former, thwarting and intersecting the Strata, and proceeding from the lower ones to those which ly above them, it being born up by the Motion of the Vapour directly towards the surface, and pervading the looser Strata diametrically †. † Ib. p. 197. By looser Strata here the Dr. intends not only those of Sand, Clay, and the like, but even of the laxer and more porous Stone, or other like Matter, whose parts are coherent. Now if this Matter be thus derived and drawn forth of the lower and more pervious Strata, wherein 'twas originally lodg'd, and born up toward the surface, till 'tis stopt in its passage by other more close and dense Strata, in which it impacts and lodges; it must need thence follow that those lower Strata suffer a Diminution of their Gravity, by so much of this Matter as is thus derived out of them: and that these upper ones will be augmented in theirs, by its intrusion and addition unto them. So that wherever this happens, no one need wonder to find at this Day more ponderous Strata lying above the lighter in the Earth. But these things will be further adjusted and set in a more clear & certain light, when Dr. Woodward's greater Work comes forth. And now L. P. and his Associates, may make their best of their Tales of Cockles and Cornua

Cornua Ammonis; of *Echini* and *Crabs Claws*: of *Metalls* at top, and *Beds of Marble* near the surface. In the mean time I think it sufficiently appears how great *L. P's Judgment* and *Capacity* is: how quick his *Apprehension*, and how extraordinary his *Justice* and his *good Nature*.

But 'tis high time to proceed to Consideration of the rest of his doughty Reasonings. Of these the next is, *Coral*, and the *Astroites undulatus* are sometime found sticking to these suppos'd *Antediluvian Shells*, which is an Argument that the whole Mineral Kingdom was not dissolved, &c*. This may indeed pass for an Argument with such a Logician as *L. P.* all along discovers himself to be: but with any thinking or reasonable Man, 'twill be none at all. He may urge the *Flint*, the *Pyrites*, or the *Ores* that are found adhering to these Shells, as an Argument against the Dissolution as properly as the *Mineral-Coral*. For *Dr. Woodward* hath shewn* that both they and the *Mineral Coral* were all form'd at the same time: and that indeed not till after the Dissolution. And if so, to urge it for an Argument that there was no such dissolution as that *Dr. Woodward* maintains, because *Coral* was not then dissolved, when 'twas indeed not formed till after the Dissolution was over, would be pretty

* P. 8.

* Nat.
Hist. of
the Earth.
Part IV.
Conf. 2.

pretty odd in any one, unless it were a Person of *L. P's Talents*.

As the foregoing may pass for an Instance what *L. P's Reasoning* is: So we have another that may inform us what his *Sincerity* is, in the very same Page; where he charges *Dr. Woodward* with contradicting the History of *Moses*, in asserting, that the Earth was not only totally drown'd, but also dissolv'd sometime betwixt the 17th of May and the end of the same Month, in a Fortnights space†; for the Doctor no where asserts any such thing. He only concludes from consideration of certain Plants, and other Bodies peculiar to that Season, which are found still preserved in Stone and other closer terrestrial Matter, wherein they were repositied in that great Revolution, that the Deluge commenc'd in the Spring-Season, the water coming forth upon the Earth in the Month which we call May; * but no where goes about in the least to determine how long the Water was in coming forth, how long it staid upon the Earth, or at what time the Dissolution either began or ended: neither does he ever mention the 17th of May, or a Fortnights space, no nor so much as any thing that implies either the one or the other. But this is nothing in a Man of *L. P's Liberty* and *Latitude*, to use

† P. 8.

* Nat.
Hist. of
the Earth.
p. 165.
Conf. 267.
& seqq.

use his own *Phrase*, and is but what occurs in almost every Page, so that he's here but in his usual Road. We see therefore he ought to find out some other *Physical Theorist*, and *Hypothetical Speculator* to fix those Imputations upon, if he really think this a just ground for a Quarrel; which may well be questioned; for the perusal of these Essays have convinced me, that L. P. would like Dr. Woodward the better for *contradicting Moses*, and that the true reason of all the little poor *spite* he and *his Gang* have against the Doctor is, because his book doth not do so; but on the other hand, *vindicates, supports and maintains the Mosaick Account of things*, as exactly agreeable to the *Phanomena of Nature*.

P. 8.

As to the Objection L. P. next makes against Dr. Woodward's account of the Deluge, *from the Irregular surface of the Earth under the Sea, &c.* it all ariseth from a gross mistake of his Sence: for he doth not say that *these Irregularities*, or *those of the Dry-Land*, either owe their original to the *manner of the subsiding* at the Deluge, but ascribes them expressly to the *Disruption of the Strata* afterwards, when some were *elevated* and others *depressed*: and therefore this Charge must arise either from a wilful de-

Nat. Hist.
of the
Earth. p.
79, 80.

design to *abuse*, or a careless *Ignorance* of the Doctor's *meaning*; and so is the result of either *Spite* or *Blunder*. Let L. P. in the next Edition of *these Essays* determine *which way* he will have us take him. But ^{P. 8.} L. P. goes on and tells us, *that to conclude, he cannot but be still of his old opinion, that the World was thus formed, in the Beginning, no total dissolution, nor any Universal Inundation, &c.* Here I observe 1. That L. P. *concludes* when he hath but little more than half done. 2. That his *old and present Opinion* is, that *Moses* tells a downright *Falsity*, in asserting so very expressly as he doth (*Gen. 7. 19.*) that the *Deluge* was *Universal*. 3. That L. P. is very willing to admit of *New Mountains, New Islands*, and other *strange changes* in the *Earth* on *false* or *no grounds*, but denies those which we have a *certain proof of*: and in particular that great *Catastrophe* of the *Deluge*, so punctually recorded in *Scripture*. And yet this is the fine Gentleman, *that my Lord knows to be well affected to the Church of England, and not in the least tinctured with Atheism!* Yea that in the *Title* to these Essays, and but eight Pages before this, owns the Deluge to be *Universal!* Well! he is a *Clever Fellow at Coherence*, I'll say that for him; a *shrewd Arguer*, and a most
Terrible

Terrible Mauler of *Hypothetical Speculators*, and all such dreaming Fellows! But yet for all his *concluding*, he will not have *done*, till he give Dr. Woodward t'other tug or two at parting, though his own Heels be tript up for his pains; 'twill shew his good will however. Have at him then after another-guess manner than heretofore! for now of a sudden d'ee, mark me! all these *Shells, Teeth, Bones and Plants*, which were left in the Earth at the first Creation, or else at the Deluge, are become *no such things* at all: but a *peculiar sort of Fossiles or Natives, or Original Creatures of the Earth*. They are the *Tricks and Sportings of Waggish Nature* under ground; who there in the dark thus diverts her self with the *Imitation* of her other Works; and then laughs at the *Philosophers*, who take her *Copies for Originals*, and for what they only *seem* to be. And to this Opinion (I perceive) L. P. is profelyted by these substantial *Reasons*. 1. Because *he is Confident* that these *Shells, &c.* could never be brought to the places where they are found by any *Barbarous Inundations*, or by any *Divine appointment*: for that *acts more regularly and discreetly*. 2. Because he saith, we find many more *such Instances* in other things, as *Plants and Animals*

p. 3.

p. 9.

p. 9, &
10.

Animals produced without any Seed, and *Shells* themselves found in the *Glands of Animals*; and therefore we may well enough give these *seeming Shells*, dug out of the Earth, *such an Original*. As to the first of which Reasons I find the World is agreed in observing, that he always is most *Confident* that hath the *least reason* for it; and that *Impudence and Ignorance* always go together. And let any one judge whether it be not great *confidence* for L. P. to assert boldly there was *no Universal Deluge*; nor any such *Inundation* as could lodge these *Shells*, and the other *Bodies* in the *Strata* of the Earth, and yet give *no other reason* for it, but that it is *his Opinion or Confidence* there was none; and also to say that it is not agreeable to the *discretion and regularity of the Divine Appointment* of things. But L. P. should first have proved that the *Fact* is not so, before he undertake to determine the Measures of the *Divine Discretion and Regularity*. Nay he should have given some better *Instances* of his *Own Discretion* also, before he pretended to be a judge of his *Makers*. And this *Attempt* of his, may convince us of one great Reason God Almighty had in thus dispersing of the *Exuvia of the old World* in all parts of the Earth: *viz.* that they *should*

should be a lasting and universal proof of that dismal Judgment, the Deluge, and of the Universality of it: the memory of which, he foresaw, would in process of time wear out of the minds of many; and the very Fact it self be boldly denied by others. But after all L. P.'s pretence of Irregularity; what can be more so, than to suppose God to produce Shells in the Middle of Solid Rocks? Teeth and Bones of Animals in the dark Bowels of the Earth? and Trees and Plants underground only to amuse Mankind about the manner of their coming thither? We see no such Instances any where else in Nature, but all things are carried on with the greatest Wisdom, Order, and Harmony that is possible: And as indeed, a through insight into any part of Nature will afford a Man sufficient Proofs of a Deity; so the admirable Aptitude, Relation, and Proportion of one Part of his Works to another; and the Excellent Beauty and Usefulness of the whole, doth in an especial manner demonstrate all things to be the result of an Infinite Wisdom, and an Almighty Power. As to his second Inducement to believe these Shells, &c. to be congenial to the Earth; that we often find such like Instances in other things: as Animals and Plants produced without

without seed. I answer, that his saying we have such Instances, doth not prove that there are such: nor his asking why Shell-like Bodies, and Plant-like Substances, may not be Congenial to the Earth; make P. 10.
them necessarily be so: And his Question may easily be resolved in the negative, by shewing that 'tis impossible they should be formed where they are found, were it here necessary. For the Shells pretended to grow in the Glands of Animals, I P. 10.
shall now only tell him, whatever he or others of his size and understanding may fancy, the sober and intelligent part of Mankind, and those who have any true notion of Nature or Insight into Things, know what to think of such stories: and that they seem to be for the most part coyn'd to abuse and expose such credulous and trifling Pretenders to Philosophizing. These may be fitly enough rank'd with those Accounts of the vomiting up of Tadpoles, Snails, and other Animals recorded in Medical Histories, that a certain Hero in Philosophy, that L. P. wots well of, seems to be mightily taken with. In fine, 'tis somewhat odd, that one that is not in the least tinctured with Atheism, and is so well affected to the Church of England, as L. P. would have us fancy of him; 'tis odd I say, that such a one should assert
 E that

* P. 25,
26. that *Plants will propagate without seed, and Animals without Parents, or Eggs, or Seed*, since *L. P.* himself elsewhere *, to serve another turn, avers that *this Hypothesis is of dangerous consequence even to our own History of the Old World; and may evert the Mosaick Systeme here at home; for if there are Equivocal Generations (especially in the most perfect Kinds) or new Species produced every day, what need of a settled Uniform Creation, and such a distinct number of every species of Animals in Paradise, or in Noah's Ark? But besides, Equivocal Generations do not only tend to Atheism, but are evidently exploded by demonstrative Experiments.* Which (I thank him) is as full a *contradiction* to all he is now asserting, and arguing from, as I can in Civility desire of a Man so consistent with himself as *L. P.* every where is.

But after all, suppose *L. P.* had proved (though indeed he has done nothing like it) that *these Bodies* were not brought by the *Deluge*, would it thence follow, that they were not really *Sea-Shells*? 'Tis certain that there are several other ways of bringing *Sea-Shells* to *Land*. To convince him of this, I will alledge a *Passage*, that cannot but be of great *Authority* with him, out of the Writings of a very

very *Sagacious Person*, though his style hath a feartish turn with it, and very much like that of a certain pretended *Master of Arts*, that shall now be nameless. 'Tis the most Learned *Dr. Tancred Robinson* I mean, who, in a Letter to *Mr. Ray* *, asserts these to be perfect *Shells*, though he does not quote *Columna*, *Steno*, *Dr. Hook*, *Boccone*, *Grandius*, *Scilla*, *Ramazzini*, and others, who had asserted the very same before; which I confess I much wonder at, for a tender regard ought to be had for the original *Inventors of Things*, who ought not to be rob'd of the *Fruits of their Labours and Studies* by *Pyrratical Rovers* †. However the Doctor is of Opinion, that at least some of these *Shells* might have been scatter'd up and down the *Earth* by *Encampments of Armies*; by the *Inhabitants of Cities and Towns*, whereof there are now no *Remains*: or by *Monkeys and Apes* *. But the jest is, *L. P.* comes over to the Doctor at last, and they become perfect *Shells* again. And the very *Shells, Teeth, and other Bones of Fishes, as also the Plants that were lodged in the Bowels of the Earth*, pag. 3. and that pag. 4. turn'd all into peculiar sorts of *Fossils, or Natives, or original Creatures of the Earth*: were metamorphos'd all back again in the turn of an hand, p. 12.

E 2

into

* Three Discourses p. 146.

† Additional Remarks to Mr. Robinson's Book.

Mr. Ray's Three Discourses.

into the real *Teeth, Bones, and other parts of animal Bodies, as also the Trunks, Roots, and other parts of Vegetables*; or, as (with another whirl of Phrase) he has it presently after, into *vegetable and animal Parts of the Land*. Whether these and other like *Changes* very frequent in *L. P's Noddle*, proceed from the *influence* of a certain Neighbouring *changeable Planet*, or what other *Cause*, I confess I am not *Physical Theorist*, or *Hypothetical Speculator* enough to decide.

* P. 10,
11. After this he gives us a long *List of Books* *; but to what *purpose* no body will ever be able to find out. Unless he intend this for a sample of his Learning. For there are some Men in the World who think to make out by *Parade* or *Shew*, what they want in *Substance*; imagining the *Measure of their Understanding* will be taken from the *Number of their Books*, on which Account they Pile them up heap upon heap in a strange manner, and nothing, be it never so downright trash, comes amiss to them. Amongst the rest in *L. P's List*, he mentions one wrote by *Agostino Scilla*, but this only *as quoted* by Mr. Ray, *the Book being* (he says) *unknown to him* †. A Man might beat his Brains long enough before he would find out to what *end* he should averr *this Book*

Book in particular to be *unknown to him*. Some *End 'tis* plain he must have in it, for, besides this passage, he intimates the same thing *twice* in his *Additional Remarks*. He says no such thing of any of the *rest* in his *List*: and I conceive he might have treated mighty Learnedly and finely of the *Creation and Deluge*, without telling the World over and over, that *Ag. Scilla's Book was unknown to him*. 'Tis plain, this is nothing at all to the *Design* of this *Pamphlet*; but we are to know, that *L. P.* has *deep fetches* in *Policy*, and this is one of them. The Business is, *that Book* is very *rare* in *England*: and there are not it seems above *three Persons* here who have it, of whom the *real Author* of this *Pamphlet* is *known* to be *one*. Now that the citing of it might not discover *who he was*, and that he might ly *snug* and *conceal'd*, under the *borrowed Name* of *L. P.*, he bravely tells us, that the *Book* is *unknown to him*, mentioning it only *as quoted* by Mr. Ray. But the *Mischief* of all is, Mr. Ray *only mentions the Author's Name*, but *quotes nothing* at all out of the *Book*: whereas our *Sagacious Literato L. P.* *formally quotes the Title*, and in *Italian* too, the *Language* in which the *Book* is written, viz. *Lettera circa i Corpi Marini petrificati 4to Con molte*

Figure. Napoli 1670. Whence 'tis palpably evident, that, though he solemnly declares the Book *unknown to him*, he had it *actually lying before him*, and was really copying out of the very Title Page of it, whilst he wrote this; it being impossible he should copy *that* out of Mr. Ray's Book, that never was in it. But this is but one of many Instances of the vast subtlety and quickness of L. P's. Apprehension; nor is his Sincerity, we see, much behind-hand with his Understanding.

P. 10. And thus he tells us *he hath done with this Problem*, as I suppose the Reader by this time judges 'tis fitting he should. But for all his *concluding before*, and his *having done now*, he will neither conclude, nor have done, till he discourse a little with the Author of the Late Essay towards a Natural History of the Earth, whom I perceive L. P. hath a particular kindness for; and who, because himself, and all Mankind that ever looked after them, have found *Shells, &c.* every where enclosed, and often fair and entire, in the midst of solid Stone and Marble, was so weak as to think they were not dissolved at the Deluge, as all the Fossils of the Earth were. But this, L. P. (who sees much farther into a Milstone than another Man) concludes cannot be true; because

P. 12.

cause if these had been the remains of the old World, there must needs have been much greater quantities of them found, than now there are, especially of Trees, and the Bones of terrestrial living Creatures, or of the vegetable and animal parts of the Land, as he words it. I know not whether this objection be the result of his Dullness, or of his Malice and Falshood, which he thus openly exposes; bearing that Good will to Dr. Woodward, that if he can but cramp his Reputation a little, he will freely Sacrifice his own, such as it is, in so noble a Cause. This I am very sure that his Objection has no manner of Foundation. For Bones of Land-Animals are frequently found lodg'd in the Strata: as likewise are vast numbers of Trees, and other Vegetables. These abundantly attest the Truth, and warrant the certainty of what the Doctor advances. And that they are found in such Numbers, L. P. might have seen over and over, in his *Nat. Hist. of the Earth*; particularly pag. 102. 113. 257. 258. Though indeed had there been now, as L. P. insinuates, few or none of them, yet neither would that really have been any Objection; it being very reasonable to suppose, as the Doctor does, pag. 78. that at this day much less quantities of Bones, Trees,

. E 4 &c.

&c. should be found than of *Conchæ, Cochleæ, Pectines*, and other like *Sea-Shells*; Because *Those* being much lighter in specie than *These*, would settle much nearer the surface of the Earth; and consequently, unless they happened to fall amongst Bituminous, or other like matter, wherein they would be as it were Embalmed and preserved, they must needs soon Rot and moulder away; as the *Bodies* of most *Land-Animals*, the *Shells* of *Fishes* of the *Crustaceous Kind*, of *Land-Snails*, and other the like lighter *Bodies*, have long since done. And therefore our finding fewer of the *Vegetables* and *Bones*, than of *Sea-shells*, &c. in the *Strata* of Stone, Marble, and such like matter, is instead of being an *Objection*, a very great confirmation of Dr. Woodward's Hypothesis; since 'tis very well accountable in the way he proposes, but not in any other. For supposing these to be *formed stones*, & *sui Generis*: 'tis to me very strange that Nature should take such a peculiar fancy in counterfeiting of *Shells* and *Teeth*, above all other pretty things! They indeed are fine pieces of Workmanship for her to make and play with, yet I wonder she should not imitate *Bones* and *Trees* as frequently: nay even the *Works of Art*, sometimes as well as her own. Why don't

don't she let us dig up now and then a *Curious Clock*, or a *Watch*? a *Coffee-Mill*, or a *Ship*? Then might she most certainly have the pleasure of laughing at our *Virtuosi*: who presently would conclude these were all *Antediluvian Machines*. What rare work would they make in enquiring into the *Mechanicks* of the *old World*? and after a mighty bustle, the conclusion at last would be this; That these things thus found must needs be the handywork of *Tubal-Cain*, or some other like Artist, that lived a great long while ago; and were thus buried in the Earth by a great huge Deluge, that came a while after they were finished.

Next, our Author is in a sad taking what Dr. Woodward did for *Transport-Ships* to bring together the *Animals* some thousands of Miles over both Sea and Land: and then carry them back again to their respective Continents and Islands, especially in so little a time too as but a Week or two in P. 12, 13. May. And this put poor L. P. into such a fright, that he knew no more where he was, nor what he was about, than a Man would have done that had been in the *Earthquake* at *Jamaica*; But having just before been reading a *French Gazette*, out he tumbles *Marches* and *Navigations*, *Transport-Ships* and *Magazines*, *Carriages* and

and Continents, Pontons and Islands, altogether in a Lump, and part 'em who can. No sooner was this cruel fright well over, and L. P. a little come to himself again, but he tells us, that he thought to have proceeded in an Examination of the Doctors great Abyſſe of Waters, and his ſubterraneous Fire over them, as alſo of his Origine of Springs, Rivers, Vapours and Rain, and his manner of forming Metalls. And really 'twas great pity that he did not do ſo, for he hath an excellent knack at Examination! Then, 'tis like, he might have found out that Dr. Woodward no where talks of a Subterranean Fire over the Abyſſe; and therefore that's a meer Chimera of L. P. his own production. But alas the day! he was now taken with ſuch a fit of Modeſty of a ſudden, that he leaves all theſe matters to ſuch Abler Pens as underſtand Diſtillation, the Calculation and Motions of Fluids, and the Generation and Growth of Metalls and other Foffils *. What a Treasure of Philoſophy is here loſt now, for want of a Pens underſtanding but a little Diſtillation, and a few other tricks? Had L. P's. Father but put him out to a Strong-Water-Still, that ſo his Pen might have been a little train'd up to that Buſineſs, we had had as punctual an account

P. 13.

* Ibid.

account of the Motion of every drop of Water that circulates round our Globe, as the moſt Learned Dr. Tancred Robinſon himſelf could have given us: who, in a Letter to Mr. Ray, tells us, that we owe part of our Rains, Springs, Rivers, and Conveniencies of Life, to the Operation of Diſtillation and Circulation by the Sun, the Sea, and the Hills. Confer likewise his Observations * on the boiling Fountains in France, that were not ſo much as warm, and the burning Fountains that were actually cold. Though for the many hisſing Springs bubbling at the top, that he found in Switzerland, he had not, he ſays, Opportunities to Experiment and Philoſophize upon them. And I remember he elſewhere † tells us, that as to the wonderful diverſity of ſhapes that Foffils ſhoot into, reſembling almoſt every thing in Nature, it ſeems difficult to him to aſſign any Cauſe or Principle: yet he confeſſes he has been but a rude Obſerver of them. Now after this moſt Learned Doctor has declared how defective he is in this Affair; ſurely no one need wonder that our L. P. underſtood ſo little of the Generation and Growth of Foffils. We ſee what a loſs the World ſuffers by L. Ps. wanting theſe great Accompliſhments; for he is forced purely on this ſcore to break off, and not meddle any

See Mr. Ray's ſecond Phyſico-Theolog. Diſcourſe, p. 112. * Philoſ. Tranſ. n. 169. Ibid. n. 172. † vide Mr. Ray's Wiſdom of God in the Creat. P. 83.

any further with these matters. Nay, and Dr. *Woodward* hath lost too a great deal of *Diversiō* which he would certainly have met with, had not poor *L. P.* been thus *unluckily founder'd*. Though upon the whole, I think he may be pretty well contented with the *Merrymēt*, the true substantial and hearty *Merrymēt* that he hath already reapt, and that no one else will be able to forbear, who shall see the *Pleasantries* that so frequently occur in *L. P.*'s *Letters*, *Essays*, *Prefaces*, and his other *precious Pieces*.

P. 13. However *L. P.* will not leave the Doctor so; he will take a trip into *America*, and touch a little on the *Manner of his stocking his New Globe a second time after the Deluge*. And since a good beginning is a great matter, he tells us boldly, that only Part of *Mesopotamia* and *Syria*, were inhabited by the *Antediluvians*. But as *L. P.* asserts this without any grounds or proofs, so it merits no ones notice or belief; nor stands in need of any Refutation here; though were it to my purpose, I could easily demonstrate it to be as false, as 'tis contradictory to Scripture. And this confident Position being precarious, that so little and inconsiderable a part of the Earth was inhabited at the Deluge, what he afterwards
objects

See Gen.
6. 1.

objects of the unreasonableness of God's P. 14.
destroying the whole World, for the sake
of a few wanton *Asiatics*, is of no manner of force at all. And he that will give himself time to read and consider seriously the *History* of the *Deluge* given us by *Moses*, will find as Dr. *Woodward* excellently observes, there were many other good and great *Designs*, which our Gracious Creator might have in destroying the *Old World* by a *Deluge*, besides his inflicting a punishment on that present Generation of Men; whose wickedness was yet so great and Epidemical, that it Gen. 6. 5.
justly required so dreadful a judgment as the Flood was.

Remarks on the Second Part of the First Essay.

L. P. begins with a Declaration, That his design is not any way to calumniate or diminish the Authority of *Moses*, who (he saith) without dispute was one of the greatest and wisest Legislators that ever appeared in the World, not excepting *Solon*, *Lycurgus*, or *Numa*. He brought a wandering and Idolatrous Nation to the worship of one true God, and established many excellent

cellent *Laws* among them. He adapted his *History of the Creation and Deluge* to their *Capacities*, &c. This indeed, for one that is, as he tells us, no *Jew*, is a great *Encomium* upon the old Jewish *Law-Giver*; and no doubt *L. P.* values himself very much on giving him so kind a *Character*. But I would fain know whence he had his *Intelligence* in this matter: if from *Profane Story*; I should take it as a favour to be shewed those *Pagan Writers* that tell us, *Moses brought a Wandring and Idolatrous Nation to the worship of one True God*; and that he adapted his *History of the Creation and Deluge* to the *Capacities of that Nation*. But if he takes his Account of *Moses* from the *Sacred Writings*, 'tis very plain, that he is unfaithful in reporting the *Character of Moses* that is there given; for 'tis no where there said, that he adapted his *History of the Creation, and Deluge* to the *Capacities of the Jews*; so that the *Picture L. P.* hath drawn of *Moses* is not from the *Life*, but from the false and prejudicate Ideas that he hath in his mind; which perhaps he received from the *Oracles of pretended Reason*. But though *L. P.* assures us his Design is not to calumniate *Moses*: yet he pronounces it no *Crime in one who is no Jew to comment a little upon his History with a Philosophical Liberty*;

Liberty; and in short the Intention of this Part is to perswade the World that the *Mosaick* (which he, with some other late *Writers*, stiles the *common, the Jewish, and the vulgar*) *Account, of the Origin of Things and Peopling the World from one stock*, *P. 24.* (*viz.* that of *Adam*, and of *Noah*) is false and impossible; though (to give it in the words of this worthy Person, who is so averse to the *Calumniating of Moses*) we give all the *Rope and Scope imaginable* to the *Mosaick History*, representing the *divine Writer* as a Person of *Cunning and Design* rather than of *Probity and Integrity*. *Moses* tells us that he had a *Mission* from *God* to deliver the *Jews* out of *Egypt*: and that when he had done so, he gave them *Laws*, which he also received from *God*: He gives us an *History of the Creation and Deluge* in plain and positive words literally expressive of the *Truth* of things, according as he received them from *God*. But now *L. P.* attributes these actions of *Moses* to his own skill and conduct only; and reckons him amongst three *Heathen Legislators*; one of which is famous in story, for feigning to have received his *Laws* (which were of his own collecting or composing) from *Heaven*, by the help of the *Nymph Egeria*, that he might the more effectually enhance their *Veneration*.

ration. By which *Parallel* between *Moses* and *Numa*, L. P. sily endeavours to insinuate that *Moses* had only the Pretence of a *Divine Commission* and *Revelation*. And then as to the *History* of the *Creation* and *Deluge*; he calls it plainly an *uncertain Tradition*, and tells us here, that *Moses* adapted it to the *Capacities* of that *wandering Idolatrous Nation*; (i. e.) he told them nothing, or very little of the *Truth* of the matter; but invented such an *Account* as would serve to amuse those ignorant People, and excite in them a great *Veneration* for *him* and *his Laws*. But now *Moses* tells us plainly, that the *Creation* of the *World* proceeded on by such regular steps and degrees as he enumerates in the 1 of *Genesis*, and that all was finished in *six days* time: to this L. P. saith, *the Philosophick History of the Bible is not always to be embraced*. *Moses* tells us plainly, that for the wickedness of the old *World*, God did *destroy the whole Earth* by a *Deluge*: L. P. says he is of *his old opinion* still; that the *World* is just now as 'twas at the beginning, and that there never was any *Universal Inundation*.
 Gen. 9. 19. 10. 32. *Moses* saith expressely, that all the *Earth* was overspread or peopled from the *Sons of Noah*. But L. P. saith, this is nothing but an old uncertain *Jewish Tradition*: all of

of it meer *Eastern Rubbish*, and that the P. 23. *Americans* and the *Inhabitants* of all *Islands* remote from the *Continent* are all *Aborigines*. And yet this is the kind *Friend* to *Moses*, that doth not in the least design to calumniate him, or diminish his *Authority*, but pretends to bestow a great *Panegyrick* on the great *Jewish Legislator*! I had not troubled my self to take so much notice of this, but that L. P. palms himself on the *World* as one well affected to the *Church of England*, and not in the least tinctured with *Atheism*.

The chief design of the latter part of this *Essay* is, as L. P. tells us, to touch a little on *Dr. Woodward's* way of stocking his new *Globe* again after the *Deluge*: (i. e.) on a way which he can know nothing of, for *Dr. Woodward's* *Account* of the *Peopling* the new *World* after the *Deluge*, is only promised in his *Essay*, and not yet published. But because *Moses* hath said, and he finds *Dr. Woodward* purposes to shew that it really was done by one *Race of Men*, L. P. is resolved to oppose and deny it: And will have the *Americans*, and the *People* of all remote *Islands* to be *Aborigines*.

All I need say of this matter is, that when the *Doctor* shall publish his *Discourse* concerning the *Migration* of
 F Nations,

Nations, and the re-peopling the World after the Deluge by the Posterity of Noah, particularly that mighty tract of America, 'twill appear that the Mosaick History is very just, and exactly conformable to what really then happened. And so very considerable Advances hath this ingenious Gent. made in this respect, that several things in Ancient History that were not known will be made out, and many that were perplext and uncertain will be effectually cleared, and this by a method as surprizing and Extraordinary, as satisfactory and convincing. Some Heads of this Discourse he hath given in his Essay, and many more it contains not less important; all which I doubt not, but he will perform to the satisfaction of all candid and unprejudiced Persons. And because L. P. keeps such a Pother about the Negroes, and the improbability of their proceeding from the same stock with the fairer and whiter Nations: Dr. Woodward will prove, 1. That the Colour of the Negroes is not Ingenite; but proceeds from accidental natural Causes, and such as are peculiar to the Countrys they inhabit. 2. That the Negroes are assuredly the Posterity of Cham, and so are deriv'd from Noah, the common Parent of Them, as well

P. 166.

P. 26, 27, 28.

well as of the *Asiatics, Europeans, and Americans.*

In the mean time, tho' 'twere easie to shew, that L. P's *Objections* against peopling the whole World from one Race of Men, be some of them founded on downright *falsities*, most of them very *trivial*, and all of them old Threadbare-stuff, that have been alledg'd in Print o're and o're long before L. P. was born; yet I shall omit doing it here, lest I should anticipate any thing of what Dr. Woodward will shortly produce on this Subject. And when he comes to set the matter in a true light, all L. P's *Hob-Goblin and Phantom Objections* will vanish, though they now so much startle, amaze, and confound him.

Vide P. 37.

Reflections on the Second Essay, concerning the Rise, Progress, and destruction of Fables and Romances: with the state of Learning.

IN the beginning of this, L. P. endeavours to invalidate the Truth of the Sacred History of the whole Bible, by slyly insinuating that a mixture of Fable was

F 2 always

always inserted into the *Oriental Writings*; and particularly into those of the *Hebrews*, to *sweeten*, forsooth, and to *allure the minds of Men, naturally Superstitious and Credulous*. Nay afterwards he calls the *Mosaick* and other *Writings* of the *Old Testament*, *the old Oriental Rhodomantade which was sanctified even in Syria it self*. By which 'tis already plain that his *Account of the State of Learning* is designed to shew by what steps a Man may proceed to *Infidelity*, and destroy out of his mind the least remains of *Veneration* for those *Legends, Fables, and Romances*, as he is pleased to stile them, the *Books of the Old and New Testament*; which is pretty well begun for a *Church of England Man*, and one not in the least *tinctured with Atheism*! But he goes on, and saith, *the oldest Books were Mythological*. And to shew his skill in the *History of Learning*, names *four*: and that we may have a sample of the *Epicurean Chronology*, (which is exactly agreeable to the *Mahometan*): he begins with *Æsop* first; though he did not live till above 600 years after *Orpheus*, and 500 after *Homer*. Then he adds, that the *Sacred Authors* complied with this *Humour of Parables and Fictions*: the *Holy Scripture* being altogether *Mysterious, Allegorical*

gorical and Ænigmatical; which is as *ridiculous a falsity* as what follows: viz. *That our Saviour himself* (always) *gave his Precepts under this Veil*, for he must mean that he did *universally* do so, or he can mean nothing. But indeed one must conclude such a Man as *L. P.* can mean *nothing*, and doth not understand the meaning of words; who calls, as he doth, *P. 31.* *Giants, Dragons, and Enchanted Castles, Acts of Chivalry*. Is not this a pleasant Spark to set up for a *Destroyer of Fables*, and a *discoverer of the State of Learning*? With the *Old Testament* and the *Gospel*, he links the *Talmud* and the *Alcoran*; but with this difference, that he gives the *Alcoran* Preference to the *Holy Bible*, urging it as a *Proof*, that the *Arabians* excell'd the *Hebrews* in *Metaphors and Fictions*. Then straightway he falls full drive upon *Rhodomontade* and *Knight Errantry*: as he did above upon *Don Quixotte* and the *Windmills*. This brings to my Mind somewhat I read of like kind a while ago in a *late Introduction for the Booksellers*: as *Comical a Piece* as ever the *Composer* of it wrote, and I think that's a bold word. He seems indeed daily to *improve* in the *diverting strain*; a thing, till I saw this, I believed impossible. The *Passage* I mean is-- *Murco Paulo, Nic. di Conti,*
F 3 &c.

&c. run whip and spur into Knight Errantry-- that a thousand Don Quixot's, with all Cervante's Satyr, will never be able to reform them; yet a Critical Reader may glean many pretty Things from them. If this be not enough quite to break the Neck of Knight Errantry: and to destroy it Root and Branch, I never saw the like. But what an *unlucky Thing* 'tis that after he had so *bemalled* the poor Silly Knight Errants, he should quit the Battel, and turn Critick, meerly to glean pretty Things from them. Though indeed he has been a *Gleaner* all his Life time: and chiefly too out of such Authors; so that 'tis the less wonder he could not forbear here.

Well! but to examine a little the small matter of Argument L. P. would be thought to drive at here. That the way of Instruction by Fables and Parables is very Antient, there is no doubt; but though it be antient and sometimes useful, yet 'tis not always to be used; nor indeed is it so in the Bible: and therefore it proceeds from as great Ignorance in L. P. to say, that the Holy Scriptures are altogether *Mysterious, Allegorical and Enigmatical*; as to charge Grotius, Father Simon, and Le Clerc, with being of that Opinion; for any one that hath but read either the Book it self, or these

Commentators,

Commentators, can easily disprove him. But that which L. P. would be at, 'tis plain, is to make the History of the Creation and Deluge appear *Fabulous*: for that's the drift of all this mighty Pother about *Romances and Learning*, which else it seems to me, L. P. would hardly have troubled himself about. And since this is his *Design*, I will be so fair as to grant him what he desires, whenever he can shew me that any matter of Fact already past is related *Allegorically, or mysteriously in Scripture*. And till he can do that, all this long Harangue must needs be esteemed as nothing at all to the purpose, by all considering Men. Though it may indeed serve to promote his Purpose, when it comes into the hands of Men wanting true Probity of Mind, and of poor and narrow Thought. Such perhaps may think he hath as effectually depreciated the Authority of the Sacred Writers, as he endeavours to do it, and no doubt will be pleased with his exposing as he does, the Book of Ruth, that of Job, Psalms, Proverbs, and other parts of Holy Writ, without any manner of Reason or Grounds for so doing.

Next, our L. P. falls into a *wishing Fit*, that some able Pen would undertake to

F 4

write

write an *Apology* for the many *Sagacious Literati*, who are most inhumanly accused of *Atheism* at this day, because they search, and find, and hunt a little out of the Common-field, or do not run head-long in the High-road. And in downright sober Sadness, 'tis a thousand pitties that it is not done! But where Oh! where, shall we find a Pen able to undertake so great an Attempt? Why! I say, even let L. P's. Pen do it its own self. For though indeed, it don't understand *Distillation*, yet it will all alone scribe ye down an *Apology*, while a Man can eat a dish of fried *Truffles*, provided the *Thunder*, to which he is a mortal Enemy, do not put him into a shaking Fit, and by that means interrupt him. The *Thunder*, I say, which concurs to the Production of *Truffles*, as the most Learned Dr. *Tancred Robinson* notes out of *Juvenal*, but whether, because according to his *Philosophy* the *Thunder* be really necessary for their Production, and the cause *sine qua non*: or whether he noted that for the sake of quoting the end of *Latin* (to which he is I find much addicted) I am not able to determine. Be that as it will, I appeal to any one that hath read L. P's *Apology* for these very Essays, if he be not the fittest, one shall see in a Summers day to *apologize*

Philos.
Trans.
N. 202.

gize for the *Sagacious Literati* who are accused of *Atheism*. About it quickly then, Dear L. P. and lose no time, by standing Humming and Hawing between Hawk and Buzzard: For 'tis a most burning shame, so 'tis, for a Man to be counted an *Atheist*, for using uncommon diligence in searching; and having pure good luck in finding out of Truth, and more than ordinary cunning in Hunting for it, and that too when he hath already found it: And lastly, what's more than all this, neither search, nor find, nor hunt, nor run head-long one bit nor crumb in a High-Road all the while. This, I must confess, is very hard; Flesh and Blood cannot bear it. And therefore no Body can blame L. P. for being strangely discomposed and affected at such a piece of Inhumanity and Barbarity. For my part, I admire at the suitableness of his Behaviour under such deep Resentments. For he writes incoherently, and breaks off abruptly; and because we know when a Man is in great Passion he cannot speak English, he pours out a few, *Latin Scraps*, and first trots on a little in *Prose*; but alas! who can hold it long in that dull pace? *facit indignatio Versum*; away he flies to *Metre* in an instant; where, wanting breath for a while, he could

could utter nothing but *broken Hemistichs*, till at length out powder two whole *Hexameters*; and then he is at ease. Then away he runs ye pretty quietly for the rest of his Journey: and strikes the last dead doing stroke, as he thinks, at *Fables and Romances, and the state of Learning*. He tells us (by the help of Calendar Chronology) *when Printing was invented first, and when brought to perfection: when sound Learning began to hatch and creep abroad: and when new Light first darted abroad, and illuminated all our Hemispheres: when the mists of Monkery were dispelled, and a sort of Reformation appeared in Glimmerings and Flashes: how the Genius of Francis the First turn'd his Royal Cloak into Petty-coats for the naked Muses: How his Star arose and frighted away all Hobgoblins and Phantoms, and then streight turn'd into a Sun, then into a Glory, and then into a Father and Patron of Arts and Sciences. Then he tells us how England produced my Lord Bacon, who laid a Foundation of a new Experimental Learning, and how that took such mighty effect, that the present Age affords so much real Knowledge, and will not endure empty Notions and vain Speculations which had so long amused and vapoured the World; and that the true Philosophy now begins to degenerate into*
Gossiping,

P. 27.

Gossiping, into Tale-telling, into Jests, into Romantick Hypotheses, idle Whimsies, and Nubes pro Junone. Thus hath he given us in the compass of a matter of three pages, what he thinks a full and true Account of the State of Learning: and this too as we see in a Style so Sublime and Noble; adorned with such fine turns, beautiful and bright Reasonings, and at proper Intervals so decently larded with fragments of Latin; that this very Essay alone is worth the price of the whole Pamphlet, to any one that will not grudge to give one poor Six Pence for no less than four Minutes diversion.

Remarks on the Postscript.

HERE *L. P.* charges many late Authors with making general and universal Conclusions from some particulars. But who he means by those many late Authors, he hath not thought fit to tell us: and the reason no doubt is, because he cannot fasten any such Imputation on the Gentleman, he chiefly levels his malice against in this Piece. Which by the by, is a much better *because*, than that which induced him, (he saith) to take notice

P. 40.

notice of these *General and Universal Conclusions* so fallily made, viz. *Because his Lordship hath a true Logical Head, and a true way of Reasoning.* I wish I could, tho' I have no *Because* for it, say the same of L. P's Noddle! But let us see what these *Conclusions both so general and so universal* are, which are made from some particulars. Why, says L. P. some *Writers*, (we may observe that his general *miny* are come to only a few or some already, at but six lines distance) *because they find Shells on the Shores to be the spoils of Sea-animals, and Plants at Land to rise from Seed; therefore they conclude that all other Shells, or Shell-stones, must come from the same place, and be generated in the same manner.* Well! Logick and Reason are delicate things. But pray, sweet Sir, who ever said that all Shells found at Land came from the Sea? Do you think, no body ever saw or heard of Lake, River, or Land-Shells, But Dr. L. P. himself? † Nay, who was ever so stupid, as to confound *real Shells*, and *Shell-stones*: or to think that the latter ever came from the Sea? Not Dr. Woodward, I am very certain, for he saith expressly, that the *Shell-stones*, as L. P. calls them, (*i. e.* the *Conchitæ*, *Cochlitæ*, &c.) were *cast and formed within the Shells* whose names

† P. 41.

names they follow, and whose Figure they bear on their surface; * the Doctor being indeed, the first that ever clearly distinguished this matter, and set it in its proper light. And his *Conclusion* from the considerate View, and serious Examination of such vast multitudes of these Fossil Shells as every where abound, is just and right: viz. that these were once the covers of *real Shell-fishes*; since he finds that they agree in every particular with those *Exuvia* of the Shell-fishes found on our Shores, &c. not only in magnitude, in Figure, and external appearance, but in their internal Texture, in specifick Gravity, and, to be brief, in all other respects. So that his *general Conclusion* is very far from being grounded only on a few particular Instances; the whole internal face of our Earth, giving that conclusion an *irrefragable support*. And I can't but think their conclusion also is just and good, that affirm all *Insects* to be generated by *Animal Parents*, and all *Plants* arise from *Seed*: not because they see some only that do (as L. P. fillily pretends) but because they see the *generality* of *Insects* and *Plants* so to arise. Nay, there are some who have of late made new discoveries to evince that many of even the reputed *Imperfect Plants*, have

* Nat. Hist. of the Earth. p. 21, 182, 183, 184, 233, 234.

P. 41.

have Seeds, &c. and see the pretences to prove Equivocal Generation *evidently exploded by Demonstrative Experiments*, as L. P. assures us, p. 25. of these Essays. But it's no matter what L. P. said there; now on maturer Judgment, he thinks fit to contradict himself; and *sees no absurdity in ascribing the Origine of Plants and Animals, and of these Bodies resembling Marine Shells, &c. to (that old exploded Cause) the Plastick power of the Earth.* I don't think it worth my while to spend time in arguing against *Equivocal Generation* with such a Whiffler as I have now to deal withal: only I think fit to

* See Wisdom of God in the Creation, p. 74. &c. Synopsis Animalium in Proœmio.

P. 88. Of the Wisdom of the Creation.

mind him, that Mr. Ray, * and Dr. Lister, (as quoted by the same Mr. Ray, p. 80. *ubi supra*) are express in their denying of Equivocal Generation: which perhaps may go further with L. P. than the best Arguments that can be produced. And for a private Reason that I have, which L. P. perhaps may guess at, I must also urge to him the Authority of one great Virtuoso more, *viz.* the most Learned Dr Tancred Robinson, who in a Letter to Mr. Ray, declareth his Opinion, that *Worms found in all kinds of Animals, are taken in at the Mouth in their Meats and Drinks*, (though I confess, I should rather

rather think their Eggs were so taken in, and afterwards hatcht in their *Viscera* into worms) and that even these long slender Worms, as small as hairs that breed between the Skin and the Flesh in the Isle of Ormus in India. (Of the People, I suppose the Doctor means, unless he be of the opinion of his namesake, the most judicious Mr. Robinson of Ousby, that the Earth it self is an Animal) and are generally twisted out on Rowlers, are without doubt taken in by the water they drink in those Regions. Now if Worms of such great length as these, can descend insensibly from the Mouth into the Stomach, thence into the Guts, thence be taken in by the Lacteal Veins, and then be circulated along with the Blood through its whole Tour, and at last be left behind, either by their eating their way through the Vessels, or breaking of them so as to *Breed themselves* between the Flesh and the Skin, as arrant Worms as ever they went in: I say if this most Learned Man is willing to admit *so strange a conveyance* of Worms as this, rather than have recourse to *Equivocal Generation*, 'tis a sign he was heartily *against believing any such thing*: and knew as well as L. P. that that Opinion is *exploded by demonstrative Experiments*. And the same Person in the most

Philos. Transf. N. 202. P. 826. most Learned Account he gives the World of *Pignutts*, and *Truffles*, or *Trubs*, is inclined to believe, that even those odd sort of Bodies are *Plantæ sui generis*, and have *sulcated Papillæ* analogous to *Seed-Vessels*; and consequently may bear their *Seed*, as some other Plants do, under ground. Let L. P. consider of this at his leisure.

* P. 41. As to what L. P. next saith, * that *Shells or Testaceous Bodies may be generated in beds of Earth or Stone, as easily as Animals or Plants themselves*. I do most readily grant it him: But that *either were ever so generated*, I utterly deny.

P. 42. And 'tis not L. P.'s saying, that *Animals have been found alive on the breaking of Rocks and Stones*, will make any Body believe they were ever in the *solid Substance* of either: much less that they were generated there; any more than if, seeing an old Rat run away at the fall of an House, I should conclude strait, that it came out of the middle of some solid Beam, or other piece of Timber. On this occasion I think I may very properly remind L. P. of an *Author*, with whom on another design, he keeps a strange Pother; 'tis *Jac. Grandius*, who mentioning certain accounts of *Toads* and other *Creatures* pretended to be found alive in the midst of *solid Stone*, is inclinable to believe

lieve those Accounts are handed to us with more Confidence than Truth *, the Case of L. P's. * *Fidenter perfect Shells in Glands*, and indeed most of the other things whereon he founds what he writes. As to what he next saith, *That Men conversant in Medical Matters, do daily see diversity of Worms and other Insects, formed in the Bodies of Animals*; I need only say, that almost all the Physicians I have either read, or conversed with, and especially the Moderns, do ascribe those Worms, &c. to the Eggs of Insects of the same kind, taken down into the Bodies of those in whom they are found; and particularly, *Redi Swammerdam, Malpighi, and Dr. Tancred Robinson*; and therefore L. P. must assign us the *Physical Causes of their being thus formed Equivocally*, which he saith, p. 43. is so easy to be done, before any considerate person will grant him that they can be so formed; especially when 'tis so easy to account for their Conveyance into the Body, by supposing their Eggs swallowed in our Meat or Drink, without that which L. P. thinks himself very Arch and Witty in proposing, viz. *a taking the Microcosm all to pieces, in order to bring them in vi & armis*. P. 44.

After this L. P. saith, that 'tis hard to conceive how such innumerable *Aquatick Animals* could be destroyed by a *Deluge of their own Element*. To a Person of his Understanding, this may be indeed very hard to conceive: but to any Man of common Sense, the thing is as easy as may be; since there was at the *Deluge* so dreadful a disturbance and Commotion of the Water, so vast a glut of dissolved earthy and stony

stony Matter to choke, and so great a quantity of *Noxious Salts* floating every where about, to *poison and kill* the Fishes. And don't we see abundance daily destroyed now? the *Covers* of which appear every where on our Shoars? To me it seems *more hard to conceive* that any at all could *scape destruction*, at that dismal Catastrophe; and those which did so, I cannot but look upon as preserved on purpose at that time, by a particular Providence of the Author and Supporter of Nature, to stock the Aqueous part of the Globe anew. And lastly, 'tis senseless to say a thing is *hard to conceive*, when the proof of fact (*i. e.* the *Shells* of Aquatick Animals so destroy'd) is so *notoriously known*, that it hath been taken notice of every where: at all times, in all places, and in almost all *Ages* of the World.

P. 44. *L. P.* charges *Dr. Woodward* for contradicting *Moses*; who, he saith, *supposes the Mountains to have stood firm and entire during the Deluge*. That they stood so till the Waters encreased to their greatest height, I grant *Moses* expressly tells us, and I'm sure *Dr. Woodward* as expressly asserts, p. 255, 256. where he refutes the Opinion of a *Learned Theorist*, that there were no Mountains before the Flood, from this very place of *Moses* (*Gen. vii. 19, 20.*) So that 'tis plain that this is a malicious reflection of *L. P.*'s and without any manner of foundation. As to the particular time when the Earth and Mountains were dissolved, *Dr. Woodward* hath not assigned it: nor was it needful he should do so in *That Essay*. But as he hath plainly proved that it was

was done, so 'tis as plain that he doth not suppose it done, till after the Waters prevailed to their greatest height; which is enough to disprove what *L. P.* charges the Doctor withal, *viz.* contradicting of the sacred Historian. As to what he saith of *Sir John Narborough*, p. 45. That though he observed *Lumps of Oyster-Shells buried in the Cliffs or Hills, on the Coast of Patagonia*; yet he could never find any *Oysters in those Seas, though he had sounded most of the Parts of South-America*. This Passage, I say, is nothing at all to his purpose; for all that *Sir John Narborough* saith is, that he could find no *Oysters in the Harbour*; (See his *Voyage to Chili*, p. 46.) which is no more a wonder than that they are not usually found in our *Harbours*; as every one knows they are not: unless some few, that chance to be driven in by a *Storm of Wind* now and then: or Beds of them purposely laid down there for growth and fattening. And if the Reader will please to consult that passage he cites, in the *Voyage it self*, he will find that *Sir John* concludes from his finding them so plentifully in the *Hills*, that those *Oyster-Shells were laid there when the Earth was formed*: as undoubtedly they were, *viz.* at the *Deluge*, when the *Strata* of the *Globe were formed anew*. But he no where says, that he could find no *Oysters in those Seas*, as *L. P.* with his usual sincerity, quotes him: So far from it, that on the contrary, *Sir John* himself saith expressly but two Pages before, that they saw *Oyster-Shells lying on those Shores*, and in a place too which could not be far from this very Harbour. So that this may pass for

another Instance of *L. P.*'s. poor and base design to traduce *Dr. Woodward's* Hypothesis at any rate, even at the expence of his own Honesty.

P. 46.

What he next tells us, *That many Shell-stones and Fossil-Shells, &c. are found in Europe, that cannot be match't, either at Sea or Land,* is no such mighty piece of news, as that *L. P.* should value himself on its discovery. For *Dr.*

P. 25, 26. *Woodward* mentions and allows it, ev'n in *England*: and the Consequence that the *Dr.* draws from it is just and fair, and no weak Evasion or unsound Conclusion, as *L. P.* calls it. For since all these (hitherto) unmatched Shells have the Essential Characters of *Sea-shells*, and shew as near a relation to some now extant on our shoars, as the different Species of those themselves do to one another; since they are all of the same Specifick Gravity with those to which they are so generically allyed, and also are of the very same Texture and Constitution of Parts, as the Doctor asserts: And since also *Divers* and *Pearl-Fishers* do assure us, that they find many strange and unusual Shells, such as are no where found on the shores, but are continually concealed in the deep bosom of the *Ocean*: since likewise *Dr. Woodward* can pair several Fossil shells with the *Sea ones*, which before were pronounced by some inquisitive Gentlemen to be absolutely unlike any thing that the *Sea* produceth; I say considering this and much more, which the Doctor produceth to this purpose, p. 24, 25, 26, &c. I think he had good Cause to suppose that these Matchless Fossil Shells do belong to the *Ἐγκύσσιος*, or *Pelagicæ*,

agicæ, (i. e.) to some Species of Shell-fish which lye always or generally hid in the deep Parts of the *Sea*, and never, or at least very seldom, appear on the Shores.

Next *L. P.* saith, that several Authors have attempted to prove the Strata, or Layers of our Globe, to proceed from the several Sediments of the Universal Deluge. By which he would intimate (though with great Injustice) that *Dr. Woodward* was not the first Inventor of this Hypothesis. To which his last Refuge, I return; That either *L. P.* believes this Hypothesis to be true and rational, or false, unreasonable, and absurd: if he believes the former, why doth he so keenly oppose it, and write against it? If he believes it to be Un-Philosophical, false, and not agreeable to the Phenomena of Nature, what signifies it that other Authors have been of the same Opinion? One would think *Dr. Woodward* had sufficiently exposed himself, had he set up a precarious and false Hypothesis, only by so doing; and therefore to accuse him after that of filching it from others, is foolish as well as unjust. For it really might atone something for his Errours, that he was led into them by the Authority of some great Men before him, had any such proposed it. But here we see *L. P.* changes his note, and vents his Spleen after a new manner: his former endeavours having proved ineffectual for any thing but only to expose himself. But on this Topick I shall have occasion to say more hereafter, when I come to consider *L. P.* under another shape.

He

He is now at last in a good humour of *making an end*, as well as *concluding*: which indeed I'm very glad of, being quite sick of following so *trifling* and *inconsistent* a Scribler. Well, but let us see what he hath to offer at Parting! Why saith our Essayer, *The common Problem that a Solid included within a Solid, must of necessity pre-exist before the Including Solid, is notoriously false, from the daily generation of Ferrugineous and Testaceous Stones, as also various Insects within the solid parts of several Bodies.* This indeed is a Terrible touch! For if *common Problems* once come to be *notoriously false*, we are in a *fine condition*. Though methinks 'tis a great wonder that no one should ever find out this before *L. P.* if it be so very *Common*: especially in so knowing and Philosophical an *Age*, wherein we presently call for *clear proof and ocular demonstration*, p. 38. But if after all it should not be so very *common*, but only one of *Nich. Steno's* own private Propositions? Why then doth *L. P.* make it so trite and obvious? O thereby hangs a Tale! *Dr. Woodward* must be supposed a Stealer of *Common Problems*, ay and *notoriously false* ones too. But the mischief of all is, the Doctor hath not a word about it; and therefore *L. P.* must this bout allow himself to be a little mistaken: as he is also about the meaning of the word *Problem*: which here (and p. 10.) he is so fond of. For a *Problem* (in Geometry) signifies something proposed to be done: and therefore cannot be properly said to be either *true* or *false*. This *Steno* very well understood: and therefore he styles that which

L. P.

L. P. aims at, a *Proposition*, and not a *Problem*, (*Vid. Steno's Prodrom. Engl. Edition, p. 22.*) And to shew that *L. P.* transcribes as lamely, as he understands, I will recite the Proposition it self. *viz. If a solid Body be every where encompassed by another solid Body, That of the two, was first hardened, which in the mutual Contact doth express on its surface the properties of the surface of the other, which though it might be to Steno's, is nothing at all to L. P's purpose.* But be it what it will, *Problem* or *Proposition*: be it *Steno's* own proper goods and Chattels, or as *Common* as a *Proverb*, or as *L. P's* scraps of *Latine*, I don't care, let us but take it in *L. P's* own way, and I'm sure 'tis as true as that *two and two make four*, That a *solid Shell, or a Tooth* being found inclosed every way in the midst of a *solid piece of Stone or Marble*, must of necessity pre-exist before the including *Stone or Marble* attained its solidity: or else it can never be imagined how it could get thither; but of this more in its place. And when ever *L. P.* will bring me one of his *daily Instances of the Generation of an Insect, or of a Stone, within the solid Parts of a Body*, properly speaking, I will not only grant that he is the happiest *Refuter of Common Problems*, that ever I met withal, but also a most formidable *Confunder of Hypothetical Speculators*. But as a concluding Instance of *L. P's* not understanding the meaning of words, if the mistake about a *Problem* will not convince us, he tells us next (p. 47.) That such a *Generation of Insects* doth not necessarily induce any *Fortuitous, or Equivocal Generation*, though the latter may sometimes be brought about. Now is not this extremely subtle and fine, that a thing may be brought about, but not induced? Would not one think he were hastening towards *Lapland*! or indeed rather just come from thence, or from ** (he'll easily imagine whence I mean) with his head full of *Petrifications*? But hold! here's a Reason coming after, which ought not be overlooked. You must

must know then that this *Induces* no Equivocal Generation, though it may be brought about. For, that *Pow-
erful Principle that Intends over, and governs Univocal
Generation, is not limited to one single plastick Method;
seeing Matter is capable of all Forms; Jovis omnia plena.*
Well! 'tis a brave thing to be *M. A.* and acquainted
with one that hath a true *Logical Head*, and a sound
way of Reasoning. This *L. P.* hath the prettiest out-
of-the-way-Method with him! Yet I would fain ask
him a question or two now, if I dared, but I know
he will be angry, and think that I don't understand
him; so I must be quiet. But for my Part, I always
thought, That for an *Insect* to be generated within a
solid Stone, or in any place where its *Animal Parent*
could not come to lay, nor any Wind, or other Cause,
convey an *Egg*, was to be generated *Equivocally*; but
I see one may live and learn. Though, I doubt, I shall
never know what to make of *Equivocal Generation*, if I
learn of *L. P.* for he hath first asserted it at p. 10:
then positively denied it at p. 25: and now believes
that it may be brought about, though not induced, by
the *plastick power of Univocal Generation*. But he well
observes, that *Matter*, (*i. e.* the Matter of some *Mens
Brains*) is capable of all Forms. And such undoubtedly
is the *Materia informata* of *L. P.*'s Noddle. Now if
he will allow me one snip of Latine in return to his
Jovis omnia plena, I'll have done; and to oblige him
the more at Parting, it shall be out of his beloved old
Acquaintance *Ovid's Metamorphosis*,

—*Rudis indigestaq; moles,*

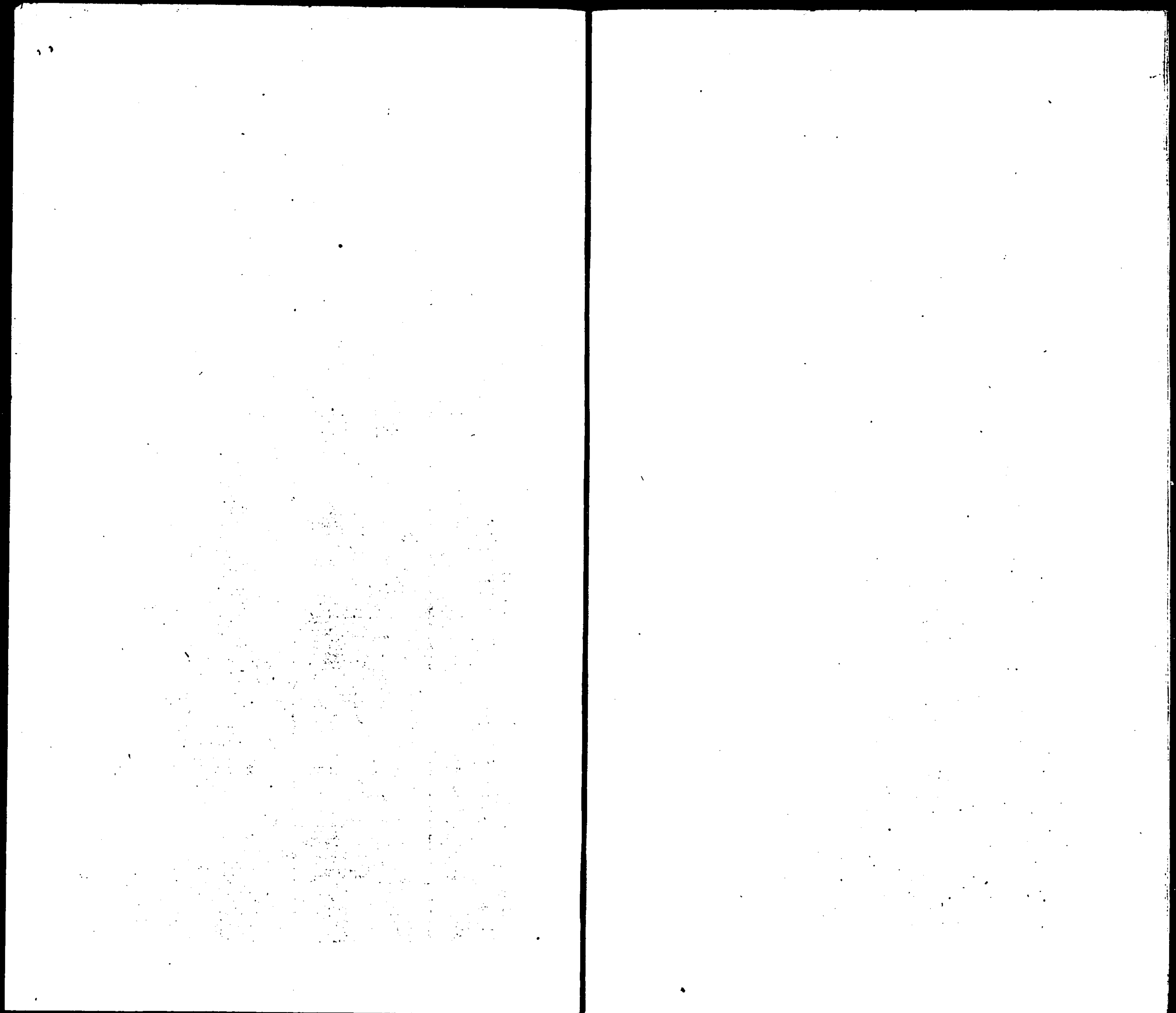
Nec quicquam nisi pondus Iners—

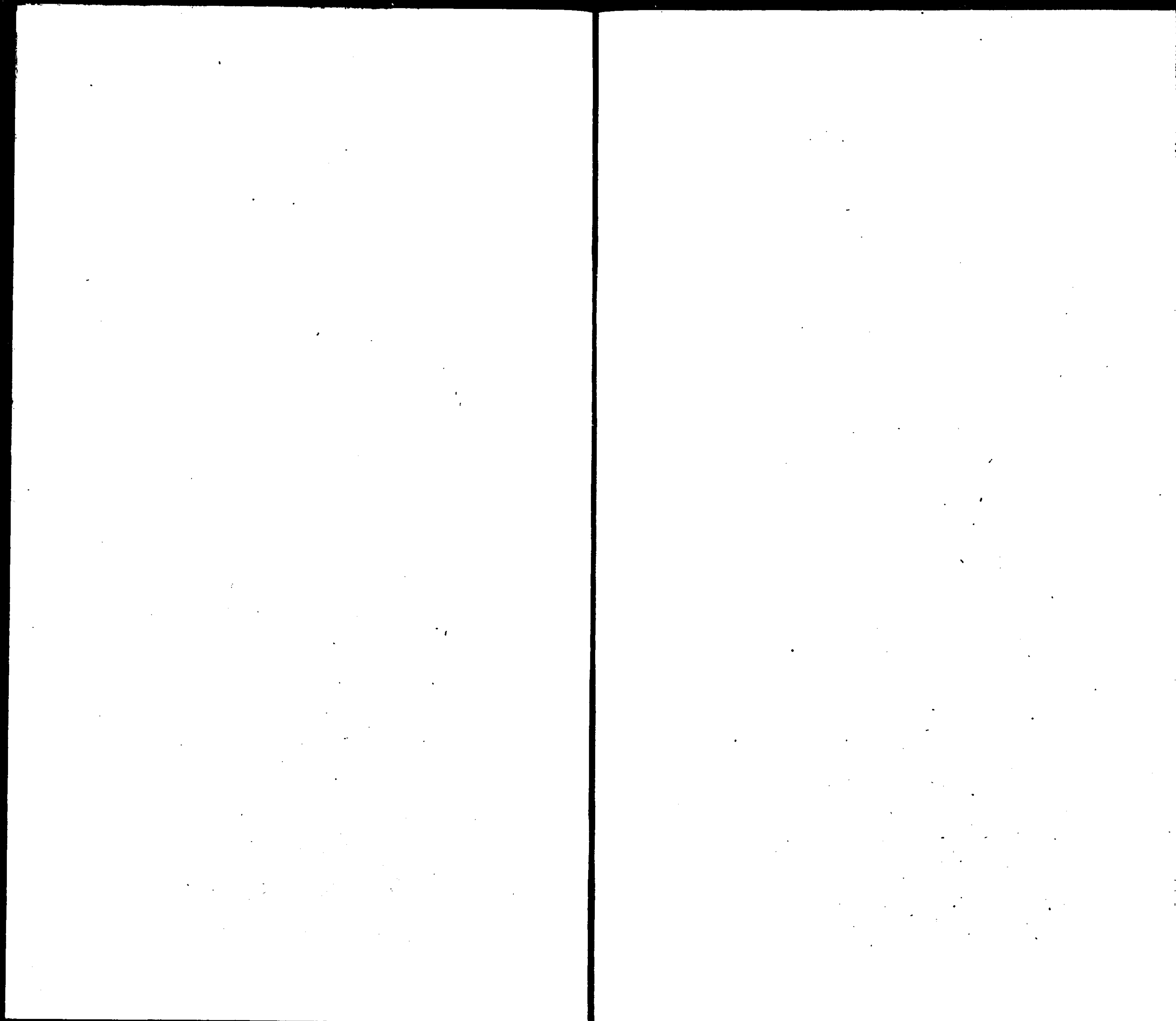
Which, to save him the trouble of turning over his
Dictionary to construe, I will thus English;

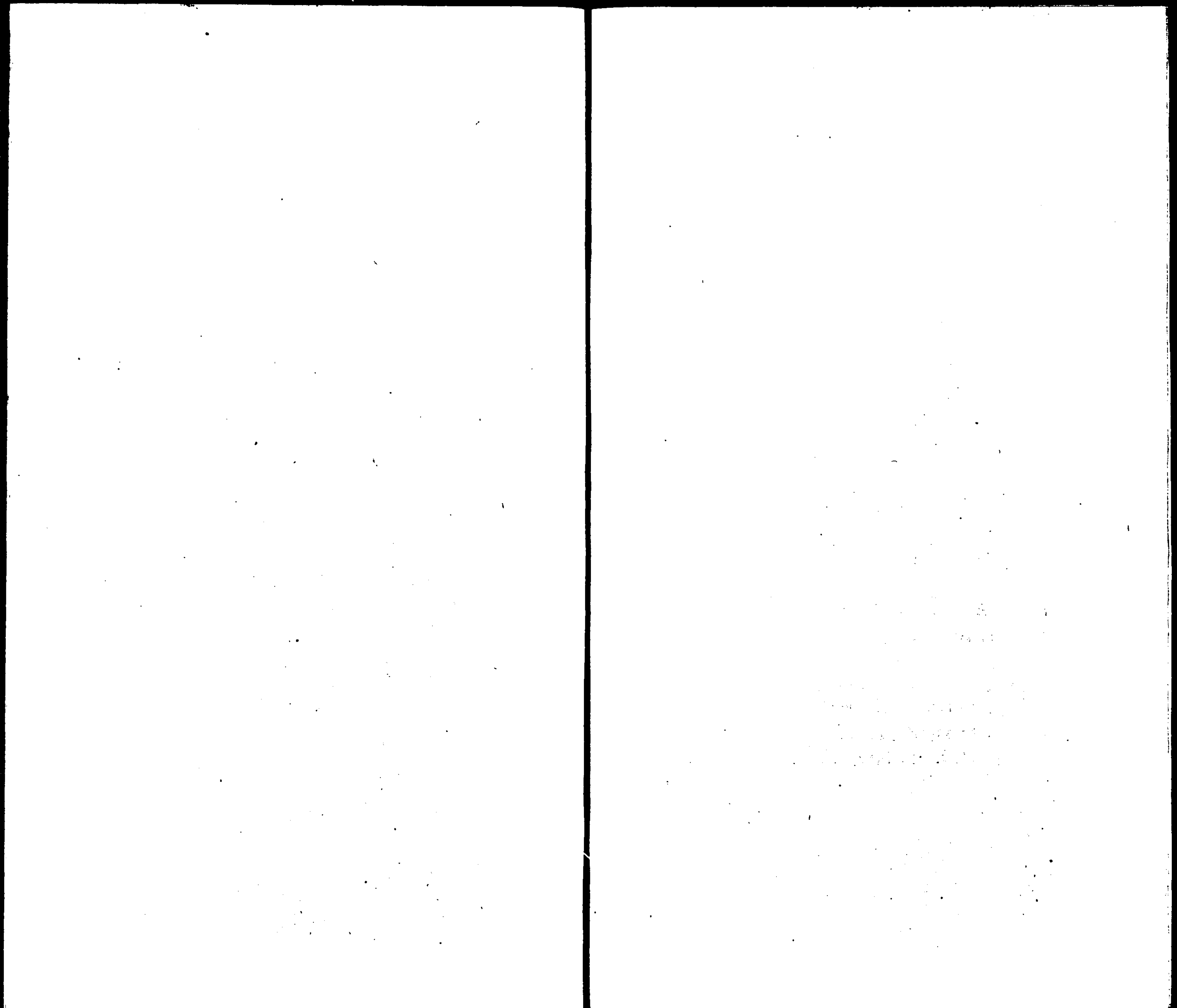
A Clumsy Load of undigested Brains,

Where nought but heavy lumpish Dullness reigns.

Some







REMARKS

ON THE

TWO ESSAYS,

Pretended to be sent in a

Letter from *Oxford*,

TO A

Nobleman in *London*.

The *first* concerning some Errors about
the Creation, General Flood, and the
Peopling of the World.

The *second* concerning the Rise, Pro-
gress, and Destruction of Fables and
Romances. With the State of Learn-
ing. By L. P. Master of Arts.

Some Remarks
ON
Two Letters

Publish'd in the
Miscellaneous Letters,

An. 1695, N. 22, & An. 1696, N. 2.

Remarks on the First Letter,
*Pretending to give an Account of, and Re-
flections upon, the two Essays sent from
Oxford, dated, Dublin, Dec. 18, 95.
and signed S. G. A.*

THAT these Letters were
not written by that lear-
ned and worthy Person,
whose Name and Repu-
tation this Scribler would
fain assume to himself, I have very
good Grounds to believe. For the
Gentleman here intended, and of
H whose

whose Name *S. G. A.* are the Initial Letters, was not in *Dublin* the 18th of *December* 1695, nor indeed in all the Month, but gone from thence some Months before. So that, tho' our *Epistler* thought himself mighty cunning, in contriving this *Disguise*, yet is the Cheat very easily discover'd. And indeed, (to wave some *other Reasons*, which I think not needful to lay down here) there are throughout the whole, such *Peculiar Turns* and *Phrases* in these Letters, such *Affected Nostrums* of Expression, and such happy *Blunders* and *Inconsistencies*, that I cannot but think them the Genuine Offspring of a certain *Extraordinary Person* I have formerly had Occasion to discourse with, even of that very *Essayer himself*, that *this Account* is so politickly here given of: And I question not, but the Reader will be of the same Mind, when he comes to consider some Passages, on which I shall bestow some Remarks below. And here I cannot but take Notice of the *Unfair Dealing* of our *Accounter*, who thus puts on a *False Shape*, and hides himself again under a *Borrow'd*, tho' different, *Name*. As I hinted before, in reference to *L. P.* There may be sometimes very good

good Reasons for a Writer to *conceal himself*; but sure there can be none to *falsifie his Name*, and to put an *Abuse* and *Imposture* on the *World*. I confess, one might as justly have been asham'd of *owning This* and *the Following Letters*, as of *writing* them; but yet a Person of any Tolerable Honesty would never have forg'd *Another's Hand* to it: But, in This Matter, our *Epistler* is exactly like *L. P.* (a)

But let us come to the Account it self. He tells us, (p. 561.) That *He will touch the two Essays with Respect and Tenderneſs, tho' indeed they deserve Rebuke*. Now why a man should be so very *Respectful* and *Tender* to a *Writer*, that he really believes *deserves Rebuke*; especially too when the one is at *Oxford* and the other at *Dublin*, and consequently at that distance as to be out of Harms way, and no fear of Beating in the Case; is a thing, at first sight, not so easie to Account for. We daily see *many Authors* handled with *no great Respect* and *Tenderneſs* by their Antagonists, and that sometimes too when they do not *deserve Rebuke*; and therefore there must be something in the Wind more than ordinary that gains the *Essayer* this *Friendly Treatment*

(a) *vid.*
Remarks
on the Title to the
Essays.

H 2 from

from his *Irish Opponent*; and nothing is more likely to procure this, than that *Relation of Identity*, (if I may be allow'd such a Blunder) that appears to me to be between them: For when a Man writes against himself, he will be apt to give his *Adversary* none but very *Respectful* and *Tender Touches*; more of which *soft* and *gentle Nature* we shall take notice of by and by. For,

Next, (p. 562.) he very *kindly* and *friendly* bestows the Epithet of *Ingenious* on the *Essays*; which, I dare say, no one but L. P. himself ever yet did; but he lives, it may be, by *Bad Neighbours*, and so is forced to be his own Panegyrist.

(*Ibid.*) He tells us, That the *Essayer* examines, and pretends to confute, many of *Those Vulgar Notions* concerning the *World's formation* out of a *Chaos*. Now what L. P. doth in his *Ordinary Talk* I know not, but sure I am he doth not any such thing in his *Essays*; as any one that reads them will see. He pretends indeed to some such thing in his *Title Page*, but quite forgets it afterward; as I have already noted*: And had not our *Accountant* had just such a *Noddle* as the *Essayer*, he must needs have seen and taken notice of this too. (*Ibid.*)

* Remarks
on the Title
to the
Essays.

(*Ibid.*) He saith, That the most *Considerable Hypothesis* attacked by our *Oxford Gentleman*, is that of *Nich. Steno*, which is, That our *Globe* hath been all covered, and dissolved, and mingled with *Water*, &c. Where I observe, that he now makes *Steno's Hypothesis* the most *Considerable*, and supposes it to be very formally attack'd by L. P.: Whereas he mentions it in his *Essays* very slightly; as the Reader will find, if he consult p. 3, 11, 46, 47. The chiefest of the *Essayer's Arguments*, (such as they are) were then levell'd against another *Author*, whom now our *Accountant* thinks fit to take no manner of notice of, tho' He be, by far, the most *Considerable Author* that hath yet treated on this *Subject*; the Reason of which 'tis not very difficult to discover. Dr. *Wooanward*, when his Book first came out, was to be opposed and confuted by something that had the *Umbrage* of *Argument*: His *Matter of Fact* was deny'd; his *Shells* affirm'd not to be the genuine *Exuviae* of *Water-Animals*, but *Stones sui Generis*, *Natural Fossils*, and *primary* or *casual Productions* of the *Earth*: His *Notion* also of the *Dissolution* of the *Earth* at the *Deluge* was to be exposed and ridicul'd as *Absurd* and *Impossible*.

H 3

Now

Now so long 'twas fit he should be mention'd by Name. But, after a while, when on the frequent *Inspection* of his *Excellent Collection* of *Fossil-Shells*, and other *Curiosities* relating to this *Argument*; on a farther *Enquiry* into the *Matter of Fact*, and on a more thorow *Examination* and *Comprehension* of his *Hypothesis*, the *Momenta* of his *Proofs* appear'd so *Cogent*, that the more *Inquisitive* and *Philosophical Gentlemen* were fully satisfied by them and that excellent Chain of Argument, that is, with so great Clearness and Uniformity, continued thro' his whole *Essay*; then his Opposers began to change their Note; then was this *Hypothesis* they had so expos'd before as contradictory, impossible, and extravagant, now, all of a sudden, none of Dr. Woodward's *Invention* or *Discovery*, but a thing that the World had been acquainted withal long before, and to be found (as * *proved and demonstrated*) in

* *vid.* this Letter, p. 562. circa finem.

Steno, Grandius, Fab. Columna, Boccone, Scilla, Ramazzini, and who not? Henceforth therefore Dr. Woodward, whom before they represented as the *Author* of a most absurd and extravagant *Hypothesis*, must be no longer look'd upon as an *Author*, but treated

as

as a *Plagiary*, and one that had stoln that from the Books just mention'd, which before they upbraided him with the *Invention* of. But as This way of Treatment of the Dr. is very spiteful and malicious, so 'tis very weak and silly, and will appear wholly groundless, when I shall have set this Matter in its due light, as I shall do hereafter *.

* *vid.* A Word of Advice to Mr. Robinson.

But our Accounter goes on, and tells us, (*p. ibid.*) That the *Author of the Essays not being satisfied with the most convincing Proofs, and indeed Demonstrations laid down by Steno, runs out into many nice and curious Speculations, which seem to oppose and overthrow all the Groundwork contrived by Steno.* In this Passage (which is worded exactly in the usual stile of L. P.) our Accounter hath shew'd his utmost Cunning and Subtilty: For, first, he calls *Steno's Arguments Convincing Proofs and Demonstrations*, (which is done, you must know, that Dr. Woodward's may not be thought so, or, at least, all borrow'd from *Steno*;) and then tells us, That *L. P. was not satisfied with them*; which I think, much more exposes L. P's Ignorance or Obstinacy, than it doth the *Natural History of the Earth*. But our

H 4

Ac.

Accounter thinks to mend all again, by saying, That *L. P.* runs out into many fine and curious Speculations, which seem to overthrow all *Steno's Groundworks*; Tho', in my Opinion, this will not stand him in much stead, and 'twould certainly redound more to his Reputation, that he could understand a Demonstration, and be convinc'd by it, than to endeavour to overthrow Groundworks by never so many nice and curious Speculations; But our Accounter, it seems, is of another Opinion, and so let him go.

P. 563, he tells us, That the *Essayer* will not conceive how the Animals could be kept alive in the General Catastrophe of the Deluge. Why, if he will not, who can help it? Will shou'd be free; and yet I question not but some will think the *Accounter* passes too great a Complement on the *Essayer* here, by allowing any such thing to be in his Power, for, it may be, he cannot conceive, and indeed he hath given some shrewd hints to the World, that he is under a sort of Fatality in this Point, and doomed to Dulness by the Irresistible Influences of his Stars: Which truly is the best Excuse he can plead, for not conceiving how the Animals could be kept

alive during the time of the Deluge, when *Moses* is so very particular as to the manner of it*: But he is very **vid. Gen.* unwilling to Conceive or allow any thing^{6, & 7.} that tends to the Confirmation of the Relations given in the Sacred Writings, as I have more than once observed, and we shall below see more clearly. But, saith our Accounter, p. 563, *L. P.* declares his Opinion in these Dubious Problems to be, That the Earth was thus Created in the beginning; and that, since Subterraneous Bodies will shoot and vegetate into great Variety of Figures; since he is confident that Shells are often found in Animals Bodies, and that Plants and Insects may rise up where Seminal Parents never came; these Subterraneous Appearances are no necessary Proof of any General Dissolution of the Earth, imagined by the Ingenious *Steno*, who yet must be own'd an over-match for our Academic. As to the Grounds of these Opinions, they are already consider'd in my Reflections on *L. P.'s Essays*; so that all I shall take notice of here, is, That this Accounter makes *L. P.* attribute the Notion of the General Dissolution of the Earth to *Steno*; which neither doth *L. P.* any where do in the *Essays*, nor did *Steno* (as I shall shew hereafter) ever

ever so much as think of it. From whence the *Unfair Dealing* of this *Writer* is as apparent as his *Weakness*. 'Twas unworthily and unfairly done, to attribute the *Notion of the Dissolution of the Earth only* to Steno, who saith not a word of it, and to pass by in silence Dr. W. who first of all advanced it, in his *Essay*. And 'twas very weakly done to make L. P. say (in this *Letter*) more than ever he had before publish'd in his *Essays*: For by this the World must needs be satisfied, that this *Account*, and the *Essays*, have both the same *Original*, proceed from the same *Person*, and carry on the very same *Design*, which is, after a different manner, to depreciate Dr. W. and his excellent and useful *Book*. But, without pretending to *Prophecy*, I dare say, That that *Work* will maintain its *Honour* and *Reputation*, when a hundred of such little spiteful *Scribbles* as these will be lost and forgotten. 'Tis pretty here to observe how our *Account*, now he thinks fit to call *Steno*, an *Over-match for the Academic*, bestows the Epithets of *Ingenious* and *Doctor* upon him, tho' before (p. 562.) he call'd him only plain *Nich. Steno*; by which one may see the great *Respect* and *Tenderness* he bears

bears to L. P.: when *Steno* is cited, or his *Books* are mention'd, then his *bare Name* is enough; but when he is to Cope with the *Acute Author* of these *Ingenious Essays*, 'tis fit he should be dubb'd *The Ingenious Steno*.

But our *Account* goes on, (*ibid.*) and saith, To these *Essays* we may add *Other Objections*, brought by some *Philosophers*, against the *Stenonian Hypothesis of Sediments*; as, That our *Fossil Salt* could not settle down from that mass of *Waters*, in whose *Pores* it would always float. Here again our *Cunning Account* discovers himself, and his *Design*. He pretends only to give an *Account* of, and to *Reflect* on the *Two Essays*; and yet supports and carries on the *Design* of the *Pamphlet* here, by the addition of new *Objections*. But 'tis impossible for him long to conceal himself; all his deep *Fetches* won't do we see; he will now and then make a false *Step*, and discover all, as, I think, he effectually doth here! Well! but see we however what these *mighty Objections* are? Why, first, you must know then, saith the *Account*, that Our *Fossile Salt* could not settle down from that mass of *Waters*, (mark ye) in whose *Pores* it would always float. Now, in good

good footh, this is a *shrewd Objection*! and were it not for one thing, perfectly *unanswerable*! For, had not *L. P.* already convinced me, that a Thing may *float* and *subside*, or, which is all one, *swim* and *sink*, at the same time, * I would really have given up this Point, and have allow'd him, that while *Fossile Salt* (or any thing else) *floateth* in the *Pores of Water*, it cannot *sink down* to the Bottom. But, thanks to *L. P.* I will now grant no such matter; nor will I *Conceive* how any such thing can be: And in this Humour I have been confirmed lately, by the *Axiom* of a certain *Ingenious Man*, that he useth at *Tables*. He, like *L. P.* is very famous for out-of-the-way *Sayings*, and particularly hath an *Apothegm* most judiciously adapted to each Cast of his *Dice*. Now, that which properly and constantly appertaineth to *Cinque-Duce*, is, *Sink a Dutch-man, and he will swim*; which jumping in so happily with this Objection of our Accounter, I think, is enough to convince any one, that a thing may *rise* and *fall*, *stand still* and *go on*, or *swim* and *settle down all at once*. But to be a little serious with our *Epistler*; That, I suppose, which he would

* *cit. Two Essays, p. 43. lin. 18.*

would say, could he speak *Sense*, and avoid running into *L. P.ism*, is this: That had the *Salt*, which now we find lying in *Beds* in our Earth, been *dissolved* and *mingled with the Water* at the *Deluge*, (which is what *Dr. W.* asserts, but *Steno* never dream'd of, of all *Fossile Bodies* whatever, as well as *Salt*) it would have been perpetually *sustained* in the Water, and consequently could never have *subsided*, nor formed *such Beds* as 'tis now frequently found lying in. But tho' I have thus given the Objection all the Advantage that can be, there is nothing of weight in it; for, Who is there at all conversant in Philosophical Studies, that doth not know, that if *Salt* be dissolved in Water, it will be sustained there but to such a *determinate quantity*? which quantity is indeed very small, in respect to the Water, being only so much as *Saturates it*, or *fills up the Intervalls* between its Particles; and if there be more than that quantity put into it, it will certainly let it fall *to the bottom*. Nor will Water thus sustain in it such a determinate proportion of *Salt* only, but even of *any other Terrestrial Matter*, it will retain in its Pores, or the Intervalls between its Particles, *so much as*
will

will fill or *saturate* them, but it will suffer all *above that* to *subside*. So that he might as well have objected, That the *Chalk, Marle, Clay, Alum, Nitre, or Vitriol*, yea, the Particles of *Iron, Lead*, or any other *Metals* or *Minerals*, could not settle down from the Water at the Deluge, as have urged it of the *Salt*.

Next he objects, That the *Ark* could scarce have been kept together, when all the *Metals, Nails and Bolts* must have been dissolved. To which I answer, That 'tis indeed true, that Dr. W. hath proved that all the *Metals* as well as *Minerals*, of the *Antidiluvian Earth* were dissolved; and that there was good reason for this, for the whole *Globe* was to be taken to pieces, to be re-

† *vid. Nat. History of the Earth* p. 11.

model'd and form'd anew, † that it might be better adjusted to the *Circumstances* of those that were to be its *Future Inhabitants*: And there was as good reason why the *Bolts and Nails* of the *Ark* should not be dissolved, *viz.* That the *Ark* might be preserved so sound and entire as to save those that God had included in it. *Moses* very expressly and emphatically ascribes the *Deluge* (*Genes. vi. 7, 13, 17. & vii. 4.*) to the immediate Hand of Almighty God: And every one almost that

that hath treated about that great Revolution, hath owned, That many things were then done in an *uncommon way*, and *Miraculously* brought about; nay One that attributes as much to *Nature* and *Second Causes* as any of Them, in the Course of that *Catastrophe*, could not but think the *Preservation of the Ark*, in that dismal disturbance, when his *Antidiluvian Earth* fell down into the *Abyss*, was owing to a *Miraculous Providence*, and therefore † he exhibits it as supported by An-

† *vid. Theor. Telluris. Vol. 2. Lat. Ed.*

gels at the time of the Deluge. No doubt therefore but that Kind and Good Power that ordered things so that there should be a *Dissolution* of the *Metals, Minerals*, and all other *Fossils of that Earth*, for the *Future Benefit* and *Advantage of Mankind*, as the Learned Dr. W. hath judiciously proved, † would preserve those that com-

† *Nat. Hist. of the Earth. ubi supra.*

posed the *Bolts and Nails* of the *Ark*, that *Vessel* which he intended as the *Gracious Instrument* for saving those he thought fit of the *Inhabitants* of the *Old World*. But after all, the *Account* hath not proved that the *Ark* had any *Metalline Bolts or Nails* in it; which he ought to have done before he had drawn any *Objections* from thence.

What

What our Accounter next mentions of *Moses's* telling us, that the Mountains stood firm during the whole Deluge, tho' it be added here under the pretence of *Novelty*, yet 'twas before urged by *L.P.* in the *Essays*; where I think I gave a *sufficient Answer* to it, and whither I refer the Reader.

Page 564. *Enough*, says he, of this *Threadbare Controversy*. And in truth, 'tis no wonder our *Accounter* should call this a *Threadbare Controversy* on which he can find so little to say. For after *six Months Study* and *Pumping*, tho' prompted and excited by a great deal of *Spleen* and *Envy*, he could bring forth no more than the *two trifling Objections* above refuted; which shews, that his *Ability* is far short of his *Inclination*; and both make but a poor *Effort* when they run against *Truth*. And its plain from the whole, the *Argument* is not yet so *Threadbare* as that our *Accounter* can *Understand* it.

As to what he next mentions of *Mr. Boyle's History of Gems* (*P. ibid.*) Tho' it must be granted, that the Honourable Author was a Person of most *Admirable Sagacity*; and that he hath offer'd in this Tract several Considerations, to evince, that *Gems were once*
in

in a fluid State; yet is it evident to any one that hath perused that Book that *Mr. Boyle* had not any the least notion of what *Dr. W.* hath since advanced about the *Origin and Formation of Gems* and other *Mineral Bodies*.

(*Ibid.*) *Many strong Arguments occur in Camden's Britannia p. 692. against this Opinion maintain'd by Steno.* 'Tis to *Mr. Lhwyd's Notes on Camden* our Author here refers. Who yet never so much as mentions one word of *Steno*. Nor indeed are *Mr. Lhwyd's Arguments* either so many or so strong that a full Answer may not easily be given to 'em. I say not this in the least to lessen the esteem of that Learned and Worthy Gentleman; for his *Observations on these things* were then but in their *Infancy*, and 'tis no wonder he was so little certain or satisfied in his Judgment concerning them; which indeed was the reason that in these very Notes he referr'd the World for more ample satisfaction to *Dr. W's Treatise* then in the Press. He there indeed calls the *Fossil Plants, Delineations, Mock-Plants, Mineral leaves, &c. Produced in Col-Slates*; but offers no *Arguments* for this of any Moment, unless the two following may pass for such; which indeed

deed are the very same this *Account-er* points out. The first of these is, That there are found only *resemblances of Leaves*, but none delineated with any *Roots, Flowers, or Seeds*. To which I think 'tis obvious to reply that the thing to be determin'd is whether those *Leaves* be *real*, and have all the *Characters of Leaves* or not. Now that they have, is what no body that duely observes them can ever reasonably deny, since they answer not only in *Magnitude* and in *Figure*, but in *Texture* too. Which indeed is what may be reasonably enough inferr'd from even *these* *Notes*†; the *Author*, affirming that *those* he made his Observations upon were not such faint *Resemblances of Leaves* as to require any *Fancy* to make out the *Comparison*, but exhibited the whole *Form and Texture* more compleatly than could be done by any *Artist*: Nay, that *these Plants* are as distinguishable into *Species* as those produced in the *Surface*: Adding that the *Form and Texture* of *these Leaves*, which are always constant and regular, will soon discover their *species* to such as have any skill in *Plants*; giving withall a Draught of a *Branch of the Common Female Fern*, with which it agrees, says he, in *Superficies and Proportion*

† On Cam-
den p. 693.

Proportion as well as figure: Also another of the common *Polypody*, having the *middle Rib* very prominent, and that of each *Leaf* rais'd proportionably. From all which I think it very evident that even *these very Leaves* this Gentleman was contemplating, were as *real Leaves* as any now growing: and his own *Account* shews them to be such, however he was led into doubt about that matter. In short Dr. *W.* hath in his *Museum*, great variety of them, many whereof are very fair and well preserv'd. These have been strictly view'd, as well with good *Glasses*, as the naked *Eye*, and examin'd by some of the most conversant in *Plants*; who acknowledge them to be *real*, and to agree most exactly with *those now growing* on the surface of the *Earth*. And such an *Examination* of the things is the true way to decide whether they are *real* or not. At least to say that because there are no *Roots, Flowers or Seeds* found, therefore the *Leaves* that are found are no *Leaves*, but meer *Minerals*, is not so logical or so strong an *Argument* as this *Account* would perswade us. And if the *Leaves* are *real*, it is very certain they must once have had *Roots*; where-ever they now are, or whatever

I 2 may

may be *become of them*; unless he can find out some *new way of producing the Leaves of Plants*, or making them grow *without any Roots*. But after all, for a further Proof that this Argument is not so exceeding *strong*, whenever he pleases I will undertake to direct him where he may *search and find and hunt out*, † (for I know'twill be no Obligation unless he have it in his *own beloved Phrase*.) many Cart Loads of *Roots* of these *Fossil Plants*. For the *Flowers*; Mr. *Lhwyd* himself observes in this very place, that *most* of these *Plants* are of the *Fern kind*; now *Ferns* never bear any *Flowers*, properly so called; and therefore it cannot surely be strange that we find not *perfect Flowers*, with the whole Attire belonging to them, in *Plants* that *never have any*: nor can I well imagine what he means by putting *them* into the *Objection*. And as to *Seeds*, he owns in the same place likewise, that he had a *Plant, which had somewhat that answered the Seeds of such Plants*. But if he cannot collect it from what Dr. *W.* hath already set forth, which indeed may be easily done, I dare engage the Dr. will in good time give him a very plain Reason why *Seeds* are

† Two Es-
saies p. 35.

it

not now *commonly* found. For, what fully takes off this *Objection*, *sometimes* they are found: And Dr. *W.* hath *enough of them* to satisfy this Gentleman they are so; and such too of whose *reality* no doubt can possibly be made. Mr. *Lhwyd's* other Argument is, that the majority of these *Plants* are not *reconcilable with those produced † in this Country*, and many of them totally *different from all Plants whatever that have yet been described*. But first I see no reason to allow that the *majority*, or indeed *very many of these* are *different from those still growing here*. At least he gives no Instances of any that are so: For, to deal freely, *two*, of the *three* whereof he hath given *Icons*, he owns *resembling common English Plants*; and for the *third*, which he insists so much upon, 'tis so *mutilated and imperfect*, that I am not able to make any judgment whether it be *a piece of a Leaf*, or indeed what it is. Besides, though we grant the thing, (and I doubt not but there may be *some strange and unusual Plants* found, amongst the *many known and common ones* we meet with) does it follow because they are *uncommon Plants*, that they are *no Plants* at all? because they are not *produced at this day*,
I 3 that

† Now
growing,
he must
mean; for,
tho' these
were mine-
rals, yet I
see no rea-
son why
he should
not think
even them
produced
here.

that they were *never* produced: Or because they were *not produced in this Country*, that they were produced *no where*? Would it not be thought very *strange*, upon bringing to a *Botanist* a *Plant* he had *never seen before*, that he should declare *that* to be *no Plant*, because he never found the *like* in *this Country* or elsewhere? or (with Relation to the *former Argument*) upon bringing him a *Leaf* alone, without *Root, Flower* or *Seeds*, should he therefore pronounce *that* no *Leaf*? As to what he urges, *that many of the Fossil Plants are different from all that have been yet described*; nothing at all can be concluded from it, unless he imagines *all the Plants in nature* described, which he can have no reason to do. To be brief, the thing he ought first to have adjusted, was whether *these*, both *common* and *uncommon*, had the *essential Marks* of *Plants*: and next, at *what time*, by *what means*, and from *what Place* they came; all which may in great measure be deduced by any Man of judgment from what *Dr. W.* hath *already publish'd* in his *Essay*, but will be more fully and clearly made out when the *Work* of which he hath given us *so good a Sample*

ple, shall it self come forth. I shall only note that *that Essay* was not *publish'd* when *Mr. Lhwyd* wrote *this*, and therefore he is *excuseable*: But 'twas out some Months before our *Account* set forth what he here calls *many and Strong Arguments*; so that I think we may safely conclude he could not (tho to give him his due, he's a Person of as much *Paradox*, and has as *odd aims*, as most men one shall meet with) well design this for a *Specimen* either of his *Sagacity*, or his *Fair Dealing*.

Remarks on the Postscript.

SOME People I've observ'd are strangely addicted to *Postscripts*. Let their *Letter, Essay, Account*, or whatever else it be call'd, be *never so short*, they must have an *after Touch* at it, almost as long as the *Precedent*. Of *this Humour L. P.* hath shew'd himself extreamly fond, and our *Account* imitates him to the Life: A sign, no doubt, of the *exact conformity* of their *mighty Genius's*. For when such *sublime thinkers* have once got in-

† P. 562. to the vein of *seeming* † to *Launch out* into *Nice and Curious Speculations*, they never know when to have done. Let the *Parade of their Literature* seem to be never so well contriv'd before, P. 565. something will at last trump up in their Heads, never thought on by them till just at *Parting*, which must be Tack'd on to the Rest, by way of *Postscript*. Thus L. P. in his Pag. 8. *Essays* tells us that he is *concluding*; and lest we shou'd not understand him (as indeed 'tis not easie for vulgar heads to do it every where) Pag. 10. he explains himself by saying *he hath done*; and yet hath he neither *concluded* nor *done*, but runs ye on again a main, dropping a spick and span *new parcel of arguments* he nev'r thought of before nor since. So also at the Tail of his Essays p. 40. *Second Essay* he tells us that *he thought to have troubled his Lord with no more at present, his Temper disposing him to speak little* (i. e. to the purpose) *and to write short*. But a fit of Wrath and Indignation seizes him all of a sudden against some *Late Authors* for *murdering of Logick*; and so he scoures away in a *Postscript*, very near as long as his *Letter*. Just so our *Account*, here, com-
ing

ing again to look over what he had writ-
ten, (a thing I judge he is not often
guilty of) finds that he had touched
the most considerable part of the *Essays*
with too negligent a *Brevity*: † And † P. 565.
therefore he must have t'other touch
at it, by way of *Postscript*: And this
you are to understand, is at L. P's
second Part of his First Essay. In the
handling of which (says he) Our Au-
thor seems to make a sort of a *Parade*
of his *Literature in Geography*, p. 565.
Which expression, as 'tis exactly like
the usual hobling *Bombast* and *Affecta-*
tion of L. P. so 'tis truer and more
appositely spoken, than perhaps Our
Account is aware of: it being very
properly applicable to one that hath
more *Shew* than *Substance* in him: That
Affects to *Talk* and *Write* about things
that he *knows little of*, but the meer
Shell: That *Pedantically* interlards his
Discourses and *Writings* with *scraps*
of *Latin*, and ends of *Verses*: And in
a word, That speciously pretends to
give the World an *Account* of the
State of Learning, and of the *Peopl-*
ing of America, and yet hath nothing
to the Purpose about either; of such
an One, I say, 'twas very happily said
by our *Account*, That he seems to
make

Vide Title
to the
Essays.

make a sort of shew or Parade of his Literature.

But our Accounter goes on, and saith: That the chief design of L. P's. Piece, is to shew the Authors dissatisfaction with the Account the Jews have given of Peopling and Planting the World before and after the Deluge. This is a very fair Discovery truly, and more than L. P. then thought fit to declare, whatever he may do here. It appeared indeed plain enough to all judicious and observing Men, That his Design was Bad: But he endeavoured to hide it all he could. He pretends to be well affected to the Church of England, not in the least tainted with Atheism; and not at all to Calumniate or diminish the Authority of Moses. † But our Accounter now, it seems, is desirous the Truth should come forth: And L. P. appear in a truer light: And that he be known to be one, who under the disguise of a Church of England Man, and not in the least tainted with Atheism, makes it his chief design to shew his dissatisfaction with the Accounts of things we have delivered in Holy Scripture, which he here basely calls the Account the Jews have given us. In pursuance of this, he makes

vid. Es.
says Apol.
p. IV. and
p. 15.

makes it his business to Oppose and Vilifie an excellent Person that hath greatly supported the Authority of the Divine Writers, by shewing that the Relations they have given us of Things are exactly agreeable to the Phænomena of Nature. This is the Glorious Design of L. P. and which is all one, This Accounter; who here enumerates and Adds to the Former Pretensions to Argument, all that after 6 months pumping and straining he could possibly get up. But I hope his declaring himself not satisfied about these Points, will not induce any one else to be so, barely on his Authority: For after all the Pother that he makes about the impossibility of the Migrations of Nations from Asia, and the Peopling all the World from Noah's Children, He hath not, as I have already observed, † produced any thing New, or indeed Material, nor to which returns have not been made long ago. Tho the Reader may expect further, and indeed full satisfaction in this matter from Dr. Woodward's Discourse promised in his Nat. Hist. of the Earth, p. 166. Mean while he may consult Bochart's Geographia Sacra, Bishop Patrick on Genesis, chap. 10. and Judge Hales his Origin of Mankind. §. 2. c. 7. Before

† Reflecti-
ons on the
Essays.

Before I leave this Postscript, I cannot but take notice of an *L. P.*ism or two in it, which plainly discover from whose inimitable Genius *the whole* proceeds. And, first, we have here, a little below, the very *Pathognomic* or *Shibboleth* of *L. P.* viz. the word *seems*, which he is so peculiarly fond of, that he will lugg it in, tho' it sometimes render a Sentence confus'd and impertinent. See the *Essays*, p. 1, where he hath *Seem unnecessary*; p. 26, *Seem to arise*; p. 33, *Seem bold*; p. 44, *Moses Seems to be*. So likewise in *this Letter*, p. 562, you have *Seem to Oppose and Overthrow*. At the end of this Letter he saith, *The Keeper of the Oxford Museum Seems to Promise*. And in the beginning of this Postscript our Accounter saith, *L. P. Seems to make a sort of a Parade of his Literature*: And here (p. 565.) he saith, *L. P. Seems to wonder, that the First Inhabitants should carry along with them, out of the Old World, so many fierce, venomous, and destructive Creatures, and leave the mild and useful ones behind*. So also in his *Second Letter*, *Seem to agree*; p. 49, *Strata of which the Globe Seems to be made up*; p. 55, *Mr. Ray Seems willing to believe*; *ibid.* Not to mention several more, of the
same

same hue, in his *other Pieces*. I do not suppose, that in every one of these places his *Seeming of it* thus is absurd; tho', I think, in some of them it might very well have been spared; but it may serve instead of several other Instances and Proofs that I think not fit to alledge here, for an Intimation to the *Reader*, that the *Essays* and *these Letters seem* to have had the *same Author*, since the very *same Stile* and *Phrase* is found so frequently in *both*. But in this last-cited Passage, wherein our Accounter tells us, That *L. P. Seems to wonder so much*, I cannot in the least blame him, had he not only *Seemed* to do it, but wonder'd in downright reality. For 'tis indeed very odd and strange, that *the First Inhabitants of America should carry with them*, on their Backs, along with *Bagg and Baggage*, a parcel of such surly and ill-condition'd Vermin, as *L. P.* knows are now frequently found there; that they should never so much as observe, that some of them had Wings to flye, and others two brace of Legs to walk or swim over; and after all, that they should make such ill choice of their Company too, as, instead of the *mild and useful ones*, to pick out *fierce venomous*,

ous, and destructive Brutes, and rather carry over Ravenous Beasts, that would eat them, than such as *they themselves could eat*. This, I must needs say, is very unaccountable! and, would he have proved it, (as no doubt but he can, if he lay his Bones to it) it would certainly have as much surpriz'd all Mankind, as that which our Accounter next tells us *did so much more surprize L. P. viz. That these first Passengers should exhaust their Native Country (unnatural Wretches as they were!) of many Species of Animals never found in it since, (no, nor perhaps before) their generally-believed Migration, p. 566.* Here was a piece of Villany for you now! this was a thousand times worse than *Exportation of Wool for France!* certainly it must needs move any one of the most compos'd and Stoical Constitution with Surprise and Indignation too, that Folks should be so wicked as to Export from their own dear Birth-place whole Species of Animals *that were never there, neither before they took them up, nor after they had carried them all away!* But after all, I hope the thing is not true, and that 'tis only a witty Tale of L. P's inventing, the Moral of which may

may be good, viz. *That there were Naughty Men, and Blunderers, so long ago, as well as there are now:* Which, no doubt, is true; and were I a Pythagorean, I should think L. P. were one of them. He Blunders so naturally, he must have used it time out of mind, and when he will leave it I can't tell, for he hath another Touch at it immediately. *Greater Difficulties arise (saith he, or the Accounter for him) about planting Terra Australis, and the vast distant Islands, with Creatures that are Strangers both to the Old and New World.* Now what he means by this, I confess, I am perfectly at a loss, and must and will be content to be so, till our Accounter's promis'd Answer to all these Objections comes abroad, which, he tells us, *shall be satisfactory,* and I'm very much inclin'd to believe will prove so, having never seen any thing yet of his, but what hath been very much to my satisfaction and diversion, as well as of every one else that hath read it; and, no doubt, when a Man comes to answer his own Objections, 'twill be as good Sport as to see a Man playing at Tick-tack, right Hand against left; especially too when we are (as he gives us Hopes) to have, in the

the close of all, a *Clear History of the Blacks, and in what (i. e. in what colour) they differ from the Whites*. This will assuredly be a *Work of Universal Use*, and can't but *take mightily*. I heretefore humbly desire our *Author* to publish it with what *Expedition* he can, that we may not be baulked of the *Expectation* he hath raised in us of a good *Regâl of Laughter*.

Re-

Remarks on the Second Letter,
*About Petrifications. Publish'd in
the Miscellaneous Letters for Fe-
bruary 1696, N. 2, P. 49.*

OUR *Epistler* comes now to perform the Promise he had made in his *former Letter*, of giving *some Sort of Account* (as he here calls it) of his *Observations on the Giant's Cansey in the District of Colerain, in the County of Antrim, in Ireland, where (it seems) he hath some small Concerns*, p. 49. What those *Small Concerns* are, I shall not enquire, being content to suppose he means *his Brains*, which came, as it appears, originally from *Teagueland*, and perhaps might be *there* when this Letter was written, tho' 'tis well known his *Noddle* was in *England*, the reason belike 'twas so very empty. But let us come to these *doughty Observations on the Giant's Cansey*. And here, had not he *unluckily chanced to have seen a Draught and Description of*
K this

*this wonderful Product of Nature, in the Philosoph. Transact. N. 212, we had had Observations as Prodigious as the Subject of them. But now, alas, little hath he to add more, except that he thinks it ought rather to be referred to the Entrochi, than to the Lapis Basaltes or Basanos. And to either, both, or neither, may it belong, perhaps, for any thing he knows of the matter; all that he is certain of, being, that it is not the Vertebres or Joints of any Land or Water-Animal left there by a Flood. And this is, I'll assure you, a notable Negative Discovery; 'tis a thousand pities we have not more such Sagacious Literati, to enrich the World with Treasures of this nature! Then should we soon grow satisfied, that the Ap-
pian Way, or the Foss here in England, is not a Crab's Claw, or a Cockle-shell: We should begin to take it for granted, that the Pike of Tenerife is not one of the Spikes of a Sea-Urchine; and, that Cotswold-hills are not Lumps of Ambergris, left there by a Flood: No one would then be tempted to take a Fleet of Ships for some of the Spawn of Noah's Ark, as from a † Seminal
† Let. 1, P. 263. Parent; nor to imagin that this Earth of ours is the Product of a Pissen-tail'd
dirty*

dirty Comet. But you will say, Who was ever so mad, as to believe any such thing? Why, no more do I think, that ever any-body was such a Rattle-skull, as to take the Giant's Cawsey for any part of an Animal, or that such a Thought ever came into any other Head but that of our Accounter's. Well! but having thus judiciously told us what this Cawsey is not, next he methodically proceeds to acquaint us, in his usual Phrase, what it is, viz. An Original Fossil, of a stupendious Figure and Dimensions, and proves the Art, and Power, and Variety of Nature in her Subterraneous Workmanship, especially in her forming of figur'd Stones, that have no relation to the Parts of Animals and Vegetables, † &c. And so, I hope, Gentlemen, you are all well satisfied as

† Much the same with what he chants forth in another Disguise, viz. These have a meaner Opinion of the Invention, Art, and Power of Na-

ture than she deserves, she varying and sporting in nothing so much as in the Figures, Textures, Shootings and Growths of Fossils. See his Two Essays, p. 46. Is it possible, that one that has these peculiar and distinguishing hitches in his Style, and labours under such a miserable barrenness of Thought, and Poverty of Expression, as to bring in (which he does very frequently) the same thing over and over, and in the same words too: Can such a one, I say, ever be so silly, as to think he can lye conceal'd and unknown? But this is but one of many ways that point him forth.

to the Account promised you of this Giant's Cawsey, which is a very pretty, *huge*, great thing, I'll assure you, and is the *Remains* of neither *Fish* nor *Flesh*, nor *Red-Herring*. Let Dr. W. think what he pleases, he hath never such a *Rarity* among all his *Collection*, tho' our Accounter hath some in his keeping *very near as big*, as we shall see by and by. For now the next thing that our Accounter hath to present unto your view, is, a *short*, but very sweet, *Catalogue of Petrifications*, which, if you believe him, *he hath all by him*, and on which he will make some general *Reflections*, p. 50. But first, it may be, some will be desirous of knowing the meaning of that word *Petrification*, which our Author not having given us, we must pick out as well as we can. Know we then, that *Petrification* is a very modish pretty word, and signifies a great variety of things in the Writings of some modern *Criticks* in Natural History. A *Rock-Plant* is a *Petrification*, because 'tis made of, or grows out of a *Stone* or *Rock*. If a *Shell*, *Tooth*, *Bone*, or any part of a *Fish* be found buried in the Earth, embodied in the *Strata* of *Stone*, &c. or wash'd off the Mountains by Rains,

and

and so appears on the Surface of the Ground, strait you must understand, that this is no real *Shell*, *Tooth* or *Bone*, but either a *Shell petrified* into a *Stone*, or a *Stone transmogrified* into a *Shell*, which you like best. Or, if this won't do, then 'tis a sort of a kind of a *mer-ry Petrification*, (call'd by the Learned *Lusus Naturæ*) 'tis a witty Production, that is, a *very Original* and *Sui Generis*, and is *conceived* under Ground by that very Wagg the *Plastick Power* of *Nature*, on purpose to *banter* us out of our *Senses* and *Understanding*. Thus if you should chance to see a *Tree*, a *Pine-Cone*, *Hazel-nuts*, or the *Leaves of Plants*, lodged in the *Earth*, in *Stone*, or any other terrestrial matter, you must not think to call this a *Tree*, a *Fruit*, or a *Leaf*, but a *Petrification* of some Mineral Matter into one of these, whereby *Nature* hath *mimick'd* these things to *divert* her self there in the dark, and to keep her self from being *idle*. And that something like this is to be understood by the word *Petrification*, (tho' I own 'tis very difficult to know now-a-days what they mean by it) will appear plainly by our Accounter's *Catalogue* of his *Petrifications*, which we will begin to shew you.

And first comes what he calls *Escallop-shell-stones, Muscle-shell-stones, and Coc-*

† As afterwards *Horn-stones, Bone-stones, Stone-rush, Horsetail-stone, Reed-stone, &c.*

kle-shell-stones †; but what these are, 'tis hard to understand, for how a thing can be a *Shell* and a *Stone* both,

I cannot imagine; tho' I doubt not but it may clearly enough be comprehended by such *Nice* and *Curious Speculators* as our Accounter, who soar quite out of the *Reach* of *Vulgar Thinkers*. But then, where did this great *Critick* in *Grammar* pick up his *Pectunculites, Pectenites, Fungites, &c.*? I believe 'twill be very difficult to find any such words in any *Dictionary, Glossary, or Etymologist* whatever, or any where, but in a *late Writer* or two, that seem to have forgot, if ever they knew any thing of the *Analogy* of the *Greek*, and indeed of the *Latin* Language. So that here our *Author* makes just such a *Parade* of his *Literature* in *Grammar*, as before he did in *Geography*. Certainly one might have expected more *Exactness* from one that twice or thrice in this short *Catalogue* takes an occasion to acquaint the *World*, that *Lhwryd* and *Floyd* are not as different as *John a-Nokes* and *Tom a-Stiles*, but *Names* belonging to the same Person, viz.
the

the *Keeper* of the *Museum* at *Oxford*. A while after we meet, in this *Admirable Collection*, with the *Trochita*, called, he saith, by some *Rock-Plants*; as also with the *Entrochi*, which are to be called either *Joinsed Stones*, or *St. Cuthbert's Beads*, according as *Masonry* or *Superstition* directs ye. Only the *Mischief* is, he hath here put the *Saddle* on the wrong *Horse*, and given that Name to one that of right belongs to the other, and *vice versa*, all counterchang'd. But for this he may plead the usual *Excuse* of many *sublime* and *sagacious Literati*,

*Whose Notions fit all things so well,
That which is which they cannot tell;
But oftentimes mistake the one
For t'other, as great Clerks have done.*

After this, another wonderful thing he hath to shew us, is, the *Lapis Rufonis, Anglice, the Toadstone*; but rather (saith he) *the Stone-grinder*. Here's a *Rarity* for ye now! Who would not go to *Ireland* immediately, to bless their *Eyes* with such a *curious Sight*? *The Stone-grinder!* why, a *Man* may travel an hundred times from *Cape Snout*, to *Promontary Tail* of this great
K 4 *Beast*

Beast of ours the *Earth*, (for, you must know, Mr. Robinson of *Cumberland* hath lately re-demonstrated it to be an *Animal*) and yet never see nor hear of any *such thing*, unless he should stumble by chance on *L. P.'s Museum*. But the best Jest of all is yet to come: Sir George Ent (saith our Accounter) *first proved this Stone to be the Dens Molaris of a Fish*, (p. 52.) Sir George Ent, every one knows, was a Gentleman of *Good Sense* and *Learning*: and 'tis very likely might shew, that the *Body* which is by some called *Lapis Bufonius*, and had been erroneously reputed a *Stone*, was not really so, but the *Tooth* of the *Lupus Marinus*. This, I say, 'tis probable Sir George Ent might demonstrate; but, that ever he should go about to prove what this *Critick* asserts, *viz.* That a *Stone* was a *Fish's Tooth*, is what no one will believe that ever heard any thing of the *Merit* of that *worthy Person*. Our Accounter must therefore even take his *Blunder* to himself; and indeed 'tis so like his *usual manner of Expression*, that it will easily be seen to whom it belongs.

After this he brings in the *Mushbroom-stone*, and tells us, (p. 52.) *That he hath some of the True Fossil-trees of the same,*

same, Dr. Plott's *History of Stafford*. p. 214, to p. 220, *dug up and down the Kingdom of Ireland*. Is not this a prettily penn'd Passage now? Could any one in the World (think ye) but our Accounter or *L. P.* have ever express'd a Thing with such a graceful and uncommon Air of *Nonsense*? What can be more diverting, than to hear a *grave Philosopher* say, *He hath by him some Fossil-trees of the same Mushbroom-stone which Dr. Plott's History of Stafford dug up and down in Ireland*? Well, but let this pass for an *L. P.*ism, and see we what he would say, could he express his Meaning like other Folks. He would then, I suppose, tell us, *That he hath now by him, in his Museum, Some of those Fossil-trees that Dr. Plott found in the Mosses in Ireland*. But Dr. Plott, (as far as I can find in the place cited by him here) doth not say he ever found any himself in *Ireland*, those he treats of were found in *Staffordshire*, which perhaps *L. P.* thinks a *County of Ireland*: And this may pass for a further *Parade of his Literature in Geography*. Herein then our Accounter is mistaken. Not that I doubt of *Trees* being so found in *Ireland*, any more than in *other places*, for I am satisfied that

that *Real Trees* are frequently dug up out of the *Earth* in all parts of the World; but the Wonder to me is, that our *Accounter* should keep such by him in his *Museum*. A parcel of *huge old rotten Firr-trees* are very *odd Curiosities* for a Man to keep by him, and will take up a pretty deal of *Room* in a *Cabinet of Rarities*. His *Small Concerns in Ireland*, I doubt, will hardly be enough to build a *Repository* for them, and surely he had not need move his *Knackatory* often, that has it stored with such *unweildy Lumber*. But no matter for all this; our *Accounter* had heard that some *Curious Gentlemen* had made *Collections of Natural Things*, and particularly of *Fossils*, (*an eminent one of which I believe he had seen*) and finding that they had, among other things, *Some small Pieces* of those *Trees* that are so frequently found buried in *Mosses*, &c. he was resolved not be behind-hand with them; wherefore searching his *Physiological Dictionary*, (a Book of indispensable necessity to such *Pretenders*) to find what *hard words* to call his *Trinkets* by; he picks ye out a *Catalogue* of things, and roundly tells ye, he hath these all by him; and because *they* had *some pieces of Fossil-trees*, he will
needs

needs fillily pretend to have *whole ones*, without any consideration of the impossibility and absurdity of such an Assertion. But 'tis all one to him, he won't be outdone by none of them all: and had he seen in any Collection but a *piece* of the *Giant's Causey* in *Ireland* as big as his *Fist*, he would have presently told the World, He had all that whole † *stupendious Original Fossil* at home in his *Cupboard*. Besides his *Vanity* in pretending to have this *fine Collection of Rarities* by him, he had also another laudable Inducement, and that was his *Malice*. He knew *Dr. W's Museum* was famous for *Fossils* and other like *Curiosities*; which he also had seen himself. He knew the *great use* the *Dr.* had made of them in his *Natural History of the Earth*, which he was resolved, it seems, to oppose; and therefore, at first, (as we have observed) he denied the *reality* of his *Shells*, disputed his *Fact*, and endeavour'd to persuade the World, that the *Phænomena* of *Nature* were very *different* from what the *Dr.* represents them. But finding, at last, that this Method would not do, he turns clear about to an opposite Point, and now pretends that all these things were
none

none of them Discoveries of Dr. W. but old trite Stuff, known a great while ago, to almost every one : and that he himself had had a *Collection* of these kind of *Fossils* a long time in *Ireland*, which here he publishes this *doughty Catalogue* of. And now this Whiffler, that had before (in his *Essays*, p. 9, 41, 46.) so strenuously asserted, That *those things were all Native Productions of the Earth, and Stones sui Generis*, owns, that they are the *Exuvia* of *Sea and Land-Animals*, and asserts, that the *Discovery and Observation of them is very ancient, and was well known to the first Ages*, (p. 53) Tho' he discovers his own *Ignorance* equally with his *Spite* and *Ill nature* ; for, as before, whatever things were dug up out of the Earth were with him nothing but *Natural Fossils* and *Stones*, produced by *Apish Nature*, in the shape of *Shells, Bones, Leaves, &c.* so now he makes all things that are found in it to be *Remains* of some *Animal* or other, for he calls all in his *Catalogue*, *The Exuvia or Parts of Sea and Land-Animals*, (p. 53.) whereas several, of those he hath put down there, belong to the *Vegetable Kingdom*, (as surely his *Fossil-trees* must do :) and *Others* are not any way belonging to either

either *Animals* or *Vegetables*, but are properly and truly *Natural Fossils* ; as, the *Belemnites, Pyrites, Astroites, &c.* which Dr. W. expressly asserts (*Nat. Hist. of the Earth*, part 4.) to whom all reasonable and intelligent Persons assent. From the whole 'tis clear *this Scribler* hath no manner of *Knowledge* of this Subject, but writes purely at *Random*, without any *Understanding* or *Judgment* at all.

P. 54, he will allow but two of the *Moderns* to have been *nice and diligent* in this *Enquiry*, viz. *Steno* and *Boccone*, who, he saith, both agree that *these Fossil parts of Aquatick Animals agree in every minute particular with the living Archetypes themselves*. In what Particulars both these Gentlemen agree, the Reader may see hereafter, when I shall give a short account of what each of them hath advanced on this Subject *. * *vid.* But, in the mean time, I beg him not to think that they would ever call the *Shells, Teeth, and Bones of Fishes*, dug up out of the Earth, *The Fossil parts of Aquatick Animals* ; no, that is a *peculiar Nostrum* of our Accounter, and which can come from no body but himself. Nor could any one, but he, place so happily together the following words, which he

Word of
Advice to
Mr. Robin-
son.

he had heard or read something about, and so tumbles them out all on this emergent occasion, as readily as the Fellow crys the *Tombs at Westminster*.

They agree, that these Fossil parts of *Aquatick Animals* (quoth he) agree in every minute particular with the *Living Archetypes themselves*, (i. e. with those *Living Creatures* which are dead and buried), therefore of the same *Original*, as in the same *Pores and Lines, Threads and Striae, Tendons and Sutures, Fibres and Teeth, Lamellæ and Figures, &c.* Now these, in my Opinion, are five couple of *Words*, as prettily link'd together as ever I met withal in my life. 'Tis great pity he was out of breath, and so was forced abruptly to leave off with an *& cætera*, else assuredly he had compleated his *Decade of Pairs*, by adding also *Pantaloons and Packsaddles, Bandores and Mousetraps, Windmills and Monkeys, Whales and Muskitoes*, and at last *Floating and Subsiding*; for then we had all been satisfied in this matter, without the Trouble of what he next puts us upon. Consult, saith he, *Steno's Myolog. Spec. in which de Anatom. Canis Charchat. p. 116, Hist. 9. also p. 130, Conjec. vi. and at the same time*
his

his *Prodromus, Engl. Edition, &c. Read also Boccone up and down, in his Recherches & Observations Natural, 8vo, 1674, with many Figures.* Is not this fine Directions now, to consult Two Books at the same time, and to Read up and down in another? But 'tis like our Accounter, who never reads any thing carefully, nor considers and digests it, but dips here and there, *up and down*, (a Phrase he's as fond of as he is of *Seeming*) in two or three Books together, in order to make a *Parade of his Literature* in the next *Coffeehouse*; and so, if he can but carry off the *Contents* of a few Chapters, and retain some Remembrance of the *Cuts and Pictures* (for where *those* abound, his *Value* for the Book is always mightily raised, but nothing will go down without *them*) then is he sufficiently set up for one of the *First-Rate Sagacious Literati*.

But he goes on, (p. 54.) *No Change in the Center of Gravity, no Inundation of Water, no Deluge, no Earthquakes, no Concussion or Shock upon or in our Globe, could possibly convey these Shells, Crusts, Teeth, &c. all over the Earth, so deep in its Bowels, &c. without supposing, with Steno, the Mass of the Earth to have been once covered and mingled with Water,*
ter,

ter, &c. Now this is as certainly *true*, as 'tis *contradictory*, to what he had before asserted. That these *Marine Bodies* could never be so *lodged* in the *Earth*, without supposing its *Dissolution*, is what Dr. W. hath clearly made out: But, that *Steno* never so much as thought of any such thing, I have hinted already more than once, and shall sufficiently prove hereafter.

He adds, p. 55.

This Dissolution and Subsiding of the Earth cannot have been at the Celebrated Flood in the days of Noah. But why, think you so? Oh! the Reason is very plain; For, saith he, there was then no Dissolution, no taking up of the Materials of the Globe into that vast Fluid, but all appear'd pure Water, &c. That is, there was no Dissolution, because there was no Dissolution. See what 'tis to be a Logician! Now even Crackanthorp himself could not have handled the Argument better! And truly nothing but so demonstrative a Proof could have justified the Boldness of such an Assertion. He asserts but a little below, in this very Page, That 'tis a demonstration that there was a Dissolution of the Earth. And one would think the Time of the Deluge should
bid

bid as fair for this as *any other*; especially too when our Accounter grants the Earth was *mixed with the vast Fluid of Water*. For that *this* was not done at the *Original Chaos* (as he calls the *Mosaic Creation*) he asserts against Mr. Ray. 'Tis plain he cannot assign any other time when this could be done; and yet he peremptorily affirms, *it was not done at the Deluge, in the days of Noah*. The Reason of which must be the *Antipathy* he bears to *that Relation*. I have already take notice how *coursely* he treats *Moses* in p. 15, 23, 24. and in many other places of the *Two Essays*; where he also flatly asserts, That *there never was any Universal Deluge* †. † P. 9. 13; He knows very well that *The Flood* 14. 45. must have been *Universal*, if the whole *Earth* were then dissolved: And all *Sober* and *Judicious Men* are now convinc'd that the *Exuvie* of *Sea Animals*, so plentifully found at this day embodied in the *Strata* of the *Earth*, and in the most *hard* and *solid Stone* and *Marble*, are a *lasting proof* both of the *Deluge its self*, and of its *Universality*. But this is what he is resolved to *oppose* and *deny*, let it be never so *absurd* and *inconsistent* so to do.

L

After

After this we have another Instance of our Accounters *cunning and deep reach* ; For lest you should think he hath any *Acquaintance* with, or *friendship* for L. P. he falls most terribly foul on him, and saith, that *the Author of the Essays from Oxford can hardly pretend to the Title of half a Philosopher*. Why truly so I did think as soon as ever I read the Book ! but I am glad to hear so plain and honest a *Confession* from *Our Accounter*. Nay, farther I here declare, that I heartily forgive him for calling L. P. the *Author of the Ingenious Essays*. I am satisfied now 'twas only to shew his *Breeding and Complaisance*, and that he exactly knows how to fit his *Terms and Titles* to the present Circumstances of things. And to make him some amends, I do here promise that I will make it my hearty endeavour to prevent L. P's *Authority from being of any consideration or weight with any one, (tho' magisterially and dogmatically set off)* as he saith here very Ingeniously and Freely, 'tis not with him †. After this he tells us, p. 57. *Another grand Objection is raised by the Author of the two Essays upon Account of getting together the Creatures at the Deluge, and dispersing*

† p. 56.

sing them to their respective Countries and Islands afterwards; to which if some abler Pen do not reply, I (says he) shall take up the Cudgels. Nay, I'll say that for him, that *Author*, as you call him, shall make *grand Objections* for a Wager with any Man betwixt this and *Yorkshire* again. And since, Sir, you are resolv'd, as you say, to *take up the Cudgels* against him, pray let me advise you to take Care of *two Things* ; First, that they be good hardy tough *well-season'd Cudgels* : And next, that you *apply* them pretty *tightly*. For he has a *Body* of his own that *seems* to be cut out for the *very purpose*, and that will abide as *true laying on* as ever a one again in this *Island*. To say the Truth, you *seem* to know *his Constitution* well: You have pitcht on the right way of *convincing him*, and taking off his *grand Objections* ; for *Reason and Argument* cou'd never yet find way into his *Head*, tho into his *Ribs* possibly they may ; therefore to your *Cudgel* by all means, as fast as may be. And now having got our *Accounter* into the humour of *Buffetting and Mauling* of L. P. I think it best to leave them at *Logarheads*, to fight it out together

ther; for what follows after this, is nothing but an awkwardly strain'd *Disguise*, to banter *L.P.* which is hisn'own dear self, under the shape of *S.G.A.* and to sham the Reader into a belief that *L.P.* and the Accounter are two different persons. But alas, that trick won't take! 'Tis impossible for a Man of his *Parts and Learning* to lye long concealed, let him never so studiously endeavour it; for even between *this place* and the end of the Letter there are such distinguishing *L.P.isms*, that no one can mistake the *Original* whence they proceed. Such as, the *Inhabitants of that Sphere of Water being forced up by some sort of Impulse or other force.* p. 56. *Feedings, breedings, Breathings and other parts of their Animal Oeconomies,* *ibid.* *Subterraneous Shells and their Figured Stones, and the Fossile Vegetables.* p. 57. *Solids of Sand,* *ibid.* (which perhaps is a mistake of the Press for *Ropes of Sand,*) and many others, which 'twere endless to enumerate, since they every-where abound in his *Writings*. But before we Part for the time, I must take notice of the *notable solution* he gives to the *Essayer's Objection*, viz. *Why were not the Plants and Testaceous Bodies dis-*

dissolved and mixt promiscuously with Metals and Stones? To which our Accounter Answers, *That their different Textures preserved them whole and undivided.* p. 57. This was a *finishing Stroke* indeed, and such an *Answer* as every one would not have thought of! Yet I dare say he might have beat his Brains about it this Twenty Years had he not filcht the hint of it from *Dr. Woodward's Book*, p. 108. which however he hath here (after his usual manner) so *murdered and confounded*, that 'tis scarce *Sence* and *Intelligible*: Tho, as he has order'd it, 'tis so truly of a piece with the *Objection*, that 'tis apparent they came both out of the same *Mint*. What pretty, subtle, deep, out-of-Course objecting, answering, puzzling, confounding ways this *L.P.* alias *S.G.A.* alias, &c. has with him! Were it not impracticable because of the *present Wars*, he could not but be sure of a *Pension* from *France*. Such a *Politician, Vertuoso, Orator, Sagacious Literato*, and what not, could never ly long without *Notice*. And so much for our *Adversary* under *this Shape*.

A
Word of Advice
TO
Mr. *ROBINSON*,
Rector of *Ousb*, in *Cumberland*,
Author of a Late Book, call'd,
New Observations on the Natural Hi-
story of this Cloud of Matter, and
this Cloud of Life :
With a Vindication of Dr. *Woodward*,
from the Charge of *Plagiarism*, cast on
him in the *Additional Remarks* before
that Book.

S I R,
'T *IS* really with a great deal of
Reluctancy that I am forced to
take notice of your Book, and to bring
your Name on the Stage: And there-
fore I hope I shall, at least, have your
Pardon for what follows. For, if you
will believe me, Sir, I would fain
L. 4 have

have your *Observations on the Natural History of this World of Matter and this World of Life*, as little read and minded, and as perfectly forgotten, as your *Anatomy of the Earth* is, which you publish'd two or three Years ago. I shall let the *Body* of your *Book* alone, (as I wish you had done the *Subject*) and only handle your *Additional Remarks*; tho' were I dispos'd to be as merry with you, as I have been with *L. P.* you have afforded a sufficient *Subject* for *Railery*. But, Sir, you have rais'd another sort of *Passion* in me; I am sorry to see a Person of your *Order* vent'ling things so inconsistent with the *Sacred Writings*, and indeed the *Common Sense* of *Mankind*, as are these you have advanc'd in your *Preliminary Postulata*, as well as throughout your *whole Book*. And therefore, Sir, instead of *Reflecting* much on what you have publish'd, I shall give you a little good Advice, and so leave you.

And first, Sir, I would have you, before you write another *Book*, endeavour to understand *Something* of the *Subject* you treat about: Which the *World* will never believe you do, till you can write intelligibly, and will con-

condescend to strip your self of that clumsy Veil of *Mystery*, *Allegory*, *Metaphor*, and *Darkness*, which you now are wholly wrap'd up in.

Secondly, I beseech you, Sir, please also to bestow a little Pains to understand the meaning of Words: Take notice, that *begging of Principles is not laying of them down*; and that *Preliminary Postulata* should be such things as all the *World* will agree to, as soon as proposed; which, I believe, no body will do to any *One of Yours*, tho' you say they are grounded on such Reason as cannot be deny'd. Then you will see, that *Creation in a Natural Way* *, and the *Principle of Passivity being an Instrumental Cause* †, and multitudes of such-† Post. 3. like Expressions, which abound in your *Book*, might much better have been express'd another way, had you known how to do it.

Thirdly, I would advise you to publish a *Miner's Dictionary*; for, perhaps after *Twenty Years Conversation under Ground*, † you may be a pretty-good Artist at their *Cant*, and can as readily murder English, as the *Gentlemen Miners* themselves. Truly this is the Only thing I can find by your *Book* you are any thing skill'd in. Then will the

* Post. 1.

† Post. 3.

† vid. Ep. Dedicat.

the World be bless'd with the excellent meaning of *Dykes, Rakes, Riders, Dams, and Strings*, p. 29. of *lying on Flatts with a Dibb and a Rise*, p. 37. of *Cills, Feeders, Raff, Ragg, and Chivers*, p. 42, 45, 49. with multitudes more of the same stamp.

Lastly, (for I won't tire you with too much) Pray before you venture out another Book, know your *Friends* from your *Enemies*, and don't believe all to be of the *latter sort* that dissuade you from *Printing*.

You have shrouded your self here under the *Patronage of a Person of great Worth and Learning*, and who, in good measure, stands charg'd with the *Approbation* of what you have publish'd; but that he hath (as I am well assur'd) declar'd, He very much discourag'd you from Printing many things in your Papers, and *entirely crossed out all your Postulata*. It was not fairly done of you afterwards, to publish it *uncorrected* and *unalter'd*, and to prefix before it such an *Epistle Dedicatory* as supposes his allowance of it *all*, when he had expressly declar'd to you his *Dissatisfaction* as to most of it. Which I cannot but mention, to vindicate Mr. *Archdeacon of Carlisle* (tho' personally unknown to

to me) from being thought a Patron of what any Man of Sense would indeed be asham'd of.

But you, it seems, fell into *other Hands*, who have dealt very hardly by you, whatever you may think of it. For you have, Sir, been made a *Property* of, to promote another Man's base and sinister *Designs*: and your Reputation hath been sacrificed, to satisfy his Malice and Ill Humor. You, Sir, might have blunder'd about in the Northern Mines for *Twenty Years longer*, have gone twice a day *to the lofty top of Cross-Fell* *, and have been * *vid. p. 198.* deservedly counted the *Cumberland Lil-* ly, or the *Ousby Weatherwisard* †, which † See his Observat. had been Satisfaction and Honour enough of all Conscience for one Man; † *about the Weather,* but these wicked *London Friends* of p. 181. yours, that have encourag'd you to appear in Print, have quite spoil'd all, and palpably expos'd you to serve their *own Ends* and *Interests*. They had a mind to vent a little poor Stuff against Dr. *Woodward*, and your Labours must needs usher this in: They had a Charge of *Plagiarism* to bring against the Dr. and you, of all Men in the World, must be pitch'd upon to alledge it. But, alas, this was as weak

weak and shallow, as 'twas malicious and injurious. For, could it be imagin'd that any body in the World will believe that *you* wrote these *Additional Remarks*, after he hath read your Book but half through? (For no one, I dare say, will ever have Patience to read it all over.) Can any one think, that *Leuwenhoeck's Epistles*, *Buonani's Observations*, *Ramazzini*, and *Boccone*, are to be found under *Cross-Fell*, (any more than *Agostino Scilla*, which for a Reason I before mention'd must not be own'd to have been seen) that being a place, it seems, where a Man can't get Books nor Conversation enough to learn, that the Plague ceaseth at *Grand Cairo* in *Egypt* when the *Nile* begins to overflow its Banks? For you on the quite contrary tell us, That then *it breaks out*, and pretend to *assign a Reason* for it too *. Will any-body believe, that a Man that had not by him either *Dr. Burnet's* or *Dr. Woodward's Book* †: that was so great a Stranger to the *Argument*, and had so little Curiosity, as not to have read *Dr. Burnet's Famous Theory*, till Fourteen Years after, when *Dr. Woodward's Essay* was publish'd, should all of a sudden be provided with every Book (almost) that

hath

* P. 71.

† *vid. Ep. Dedicat.*

hath treated on that Subject, tho' never so scarce, and all to prove *Dr. W.* a *Plagiary*, a Person whom he knew nothing at all of, but from his *Nat. Hist. of the Earth*?

But to come closer to the Point, I have good Evidence, Sir, that these *Additional Remarks* (as your Friend calls them) are really none of yours, but foisted in by a certain Gentleman, in whose Hands your Papers were placed. Yet, Sir, tho' this be so, and that I am very well satisfied that *L. P.* (the Person I have handled in the former Tracts) wrote also *these Remarks*; I must now charge them on *you*, because they come out under *your Name*. At first your Scribbling Friend lurked under the Feigned Shape of *L. P.* (which may be any-body) then under the appearance of *S. G. A.* a Person of great Learning and Reputation; but now he grows more daring, tho' not more sincere, and plainly and openly borrows your Name and Title, and consequently makes you, if not the *Author*, at least the *Voucher* of what he here so boldly and so falsely vents. I think therefore, Sir, that you are obliged in Justice and Honour, as well as Kindness to your self, to expose and disco-

discover *so unfair a Dealer*, and by some *Declaration* as publick as his Abuse, vindicate your Self and Reputation; but in this do as you please. In the mean time I must address my self to you for Fashion-sake, as the Author of these *Remarks*, tho' not without taking notice now and then, that I can discover to whom they properly belong.

* *vid. Remarks on the two Letters.*

The design of these *Remarks* ('tis plain) is to asperse Dr. *W.* as a *Plagiary*, in taking the Notions in his *Nat. Hist. of the Earth* from *Steno, Columna, Dr. Hook, Grandius, Scilla, Roccone, Mr. Ray, and Ramazzini*. This *L. P.* had been dabling at once or twice before, as I have already observ'd *: And now he makes you, Sir, dish it out for him anew. I chose to handle this Point but slightly *then*, as reserving what I had to say in Vindication of Dr. *Woodward* for *this place*; where I shall *now* (as fully as my designed Brevity will permit me) demonstrate the falseness and baseness of this *Charge*. And pray, Sir, be not angry if I am a little less merry and divertive in my Treatment of you, than I was before in handling of *L. P.* for tho' indeed 'tis still in reality *him* that I have to do

do with, yet it being under the *Reverend Mask of the Rector of Ousby*, I shall forbear any Excursions of that nature, which, had not *You* publish'd these *Remarks*, I should perhaps have made.

And, first, you tell us, Sir, That *Since the writing of the following Discourse a new Theory of the Earth hath been published, by a Thoughtful young Divine, who agrees in some Notions with you*: But yet you assure the Reader, that your Manuscript laid all the last Winter in London, and was printed off before you had a sight of that Book, which several of your Friends, you say, can testify. Now Sir, tho' it be, I believe, hard for your Friends to Testify a Negative, and to prove, that you had not seen Mr. *Whiston's Book* before *Yours* was publish'd; yet pray don't trouble your self about that matter, for, I dare say, no one will believe that your seeing Mr. *Whiston's Theory* would help you to any thing you have obliged the World withal, or that indeed you *could* take any thing from thence.

Next you blame your self (as also Mr. *Whiston*) for referring several *Hypotheses and Observations* to a late Writer, who, it seems, (as you say) hath taken them

them from others. And this you discover'd accidentally, by falling upon the *Monthly Miscellany Letters*, Vol. 1, N. 22. & Vol. 2, N. 2. as also the *Philosoph. Transact.* N. 219. Now surely, Sir, you have a great Friendship for, and as great a Confidence in L. P. the Author of the two Letters, that you will publish this to the World: And that you will now deny all Dr. W's *Observations* and *Notions* to be truly his, only on the Authority of a little Scribler, that brings no *Proof* at all for his Assertion. Then, for the *Philos. Transact.* that you cite here, In it is given indeed a sort of an *Abstract* (such a one as it is) of Scilla's Book; but would any judicious Person charge a Gentleman with being a *Plagiary* from Scilla, by seeing only an *Abstract* of his Book, and an *Abstract* too, liable to so many just *Exceptions*, as I can prove that is? None certainly but one of Mr. Robinson's *Easiness*, buoy'd up by L. P's Confidence! But pray, Sir, be but sensible how he puts upon you: He makes you here guilty of this unreasonable and unhandfom thing; and makes you speak his own Jargon and Bombast, (for, *Up and Down, Original Inventers, Pyratrical Rovers, Stupendious and Miraculous*

calous Discoverers*, are so exactly agreeable to the Affected Hobble of L. P. that any one must needs see whence they come) and all this only that you may appear to quote his poor *Scribbles*, and be subservient to the wrecking of his Malice on a Person that neither hath injur'd him nor you.

* vid. Additional Remarks.

Now let us see in what Particulars Dr. W. is chargable as a Plagiary; and what just Ground there is for all this mighty Outcry against him as such. In order to the due adjusting of this matter, I shall here give the Reader a short Account of the several Authors mention'd by L. P. or your self; of what they have advanced on this Subject, and in what Points Dr. W. and each of them, agree and differ; which I shall do, not in that confused manner they are cited by L. P. every where, but in the natural Order of Time in which they wrote: And when this is done, I question not but every one, any thing conversant in these Enquiries, will be fully satisfied of the precariousness and unfairness of this Charge.

Fabius Columna, is an Author of the
M oldest

P. 39.
Nat. Hist.
Earth.

* See the
Additional
Remarks.

oldest standing of any in L. P.'s List :
He set forth his *Minus Cogitarum Ra-
riorumque Stirpium* ^{Exordium}: His *Aqui-
silium & Terrestrium aliquot Animalium
Observationes*: as also his *Dissertatio de
Purpurâ & de Glossopetris*, in one Vo-
lume, at Rome, in Quarto, 1616. This
Gentleman is expressly mentioned by
Doctor W. and an *Historical Account*
promised of his *Writings*, as well as
those of *Steno* and other Authors on
this Subject. And therefore 'tis un-
fair to charge him as a Borrower * from
a Book which he particularly quotes
in his Essay, and of which he there
promises an *Account*. The sum of
what *Columna* hath on this Subject is,
*That the Glossopetra which he procured
from Malta, represented the Teeth of
Sharks in Figure and Substance, in their
Internal Fibrous and Porous Constituti-
on, and in their External smoothness :
And that the Fossil-shells which he casual-
ly found in Apulia, answered to the
Marine ones in Figure, Magnitude and
Structure. That he might match se-
veral of those Fossil-shells with Ma-
rine ones, is not to be doubted of.*
But there are *some* that he gives an
Account of, and particularly those
which he calls *Concha Anomia*, that I
am

am pretty sure he could not match.
These are very common at Land,
not only in *Italy*, but in *England*, and
other Countries. Dr. Woodward hath at
least 20 different species of them by
him, that were found in *Gloucestershire*,
Oxfordshire, &c. But tho he hath cau-
sed very strict enquiry to be made on
several of the *Asiatic*, the *American* and
other foreign Shores, as well as those
of the *Mediterranean Sea*, and the Coasts
of *this Island*, yet could he never hear
of any thing on all those Shores like
to the *Concha Anomia*. Nor is it at
all likely that *Columna* ever did: these
being in all probability *Exuvia* of those
kinds of Shell-Fishes which reside in
the bottom of the Ocean and never
come near the Shores.

vid Dr.
W's Nat.
Hist. p.
26, 27.

Nor can I better see how to recon-
cile what *Columna* saith of the Agree-
ment between the Fossil and Marine
Bodies in *Substance* and *Structure*,
with what he elsewhere delivers
about *their Conversion into Stone*; for
had they been really turned into Stone,
nothing could have been more diffe-
rent than *the substance of Stone* and *that
of a Shell*. Then for his Arguments for
the Reality of these Bodies; that *Nature
doth nothing in vain*: that the *Glossopetra*

M 2

petr.

petra burn into a Cinder, and not into Asbes: that the external smoothness of the Glossopetra is an Argument that they are Teeth, since he had never seen any Figured Stones, but the Chrystalline ones, that had a smooth surface; These Arguments, I say, will never hold.

That *Columna* indeed thought these *Fossil-shells* and *Glossopetra* the real *Exuvia* of *Marine Animals*, is most certain. But what then? Must *Dr. Woodward* be a Plagiary, because he thinks so too, even tho' he proves it by many Arguments *never thought on by Columna*? What he asserts of those himself found in *Apulia*, or were sent him from *Malta*, the same *Dr. W.* hath experimentally found to be true of those dug up in *this Island*, and of those which were sent him from *Foreign Parts*. The *Dr.* travel'd over the greatest part of *England*, on purpose to make Observations on *These* and other *Fossils*, as well as other *Natural Things*; and his Success was no way short of his *Industry*. For, perhaps, the Collection of *Ores and Minerals*, &c. as well as of *Fossils-shells, Teeth, Bones*, &c. found in the several *Mines and Quarries* of *this Kingdom*, which he now hath by him, for *Number, Variety, and Excellency*, is not to be match'd

match'd by any of this kind in all *Europe*. 'Tis probable *Columna* never saw the hundredth part of these kind of things that the *Dr.* hath done; and therefore what need had the *latter* to have recourse to *him* for *Arguments* to prove the *Reality* of *his Shells*? Could not his own view and examination convince *him*, as well as it did *Columna*? And indeed, what *Dr. W.* advances on this Subject, in his Essay, is chiefly from *this Ground*, his own *Observations* and *Experiment*; tho' with that he also takes in the Assistance of his Correspondents, and makes use of the printed Relations of Learned Men, among whom *Columna* is one, who asserts the Shells of *Apulia*, and Teeth of *Malta* to be really what they appear to be. He asserts it, I say; but if the Reader please to consult him, he will find, that his *Proof* of it is *very short* of what *Dr. W.* hath since advanced in his Essay †; of which I need † p. 225 alledge no other Argument, than that † seq. the greatest part of the *Writers* since *Columna* have receded from him, and have taken these things for *Meer Stones*, and *Natural Fossils*; tho' now the *Dr.* hath so clear'd the point, that no one can doubt of their *reality* any longer.

M 3

And

And as there is no reason to believe that Dr. W. took his Arguments to prove the Reality of the Shells, &c. from *Columna*; so neither is there any to conclude, that he had from him the *Manner of their being brought to Land*. For in this *Columna* is very uncertain and varying, not to say inconsistent with himself. One while, he thinks, *these Shells were a long time ago flung out by Men, and being casually cover'd with the Earth, and afterwards rotting therein, both they and the Earth about them were at last turned into Stone, by the continual*

changing of the Elements *.

Another while he fancies them left behind by the *Deluge* †. Sometimes he thinks *the Sea and Land have changed place, and that these Marine Bodies were left thus behind at the Seas going off from certain places* ||. And tho' he proposeth *all these Means* for bringing these

Bodies to Land, yet he never so much as offers *any Reason* to induce us to a belief of *any or them*. So that, I think, any one that hath read Dr. W's Book must believe that he could not take any thing from *Columna* on this Head.

There

* Immemorabili tempore ab hominibus dejectis, & casu terra obrutis intra humum putrescentibus, illa, sicut & ambiens terra, in lapidem deinde mutata, Elementorum perpetua vicissitudine. *Aquat. & Terrestr. Observat.* p. 45.

† Ibid. p. 48, 49.

|| vid. De Purpura C. XIII. & de Glossopetr. p. 36.

There are also a great many more things in which Dr. W. differs from this *Author*, because indeed he differs from *Truth*; but a few Mistakes may be easily pardon'd in a Gentleman that wrote when *this kind of Learning* was but in its *Infancy*, and who hath, in a great many Instances, shew'd himself to be a person of *Wonderful Diligence* and *Curiosity*, and who was one of the first that made any Advances towards the *Restoration of Experimental Knowledge*.

Dr. Hook, Professor of Geometry in Gresh. Coll. and F. R. S. is the next in course: And L. P. will needs insinuate, that Dr. W. hath taken something from *him* likewise; but what it is he does not tell us, nor is it possible for me to guess. He cites indeed two Books of Dr. Hook's, viz. his *Micrographia*, and his *Lectures on Spring*. In the former of these * discoursing of the Shells commonly call'd *Serpentine Stones*,^{* C. 17, p. 109.} found about *Keinsbam*, within four miles of *Bristol*, Dr. Hook thinks that *those Shells*, which he believes *to be real*, (as any judicious Person must needs do, that ever carefully observed them) came there by some *Deluge, Inundation, Earthquake, or some such other means*: and

M 4

were

were filled with some kind of Mudd, or Clay, or Petrifying Water, or some other Substance, which in track of Time hardened in those Shelly Moulds into those shaped Substances we now find them *: adding, That these Shells in many, from the particular Nature of the containing or enclosed Earth, or some other Cause, have in track of Time rotted, &c. And, That others of these Shells, according to the nature of the Substances adjacent to them, have, by a long continuance in that posture, been petrified, and turned into the nature of Stone. Now certainly no one that hath ever read Dr. Woodward's Book will think that he took any thing from this learned Gentleman, who discoursing of this matter only by the by, determines, we see, and fixes on nothing, but candidly intimates, that he had not sufficient Intelligence of these things; and therefore wishes that a good Collection of such kinds of Figur'd Stones were collected, and as many particular Circumstances and Informations collected with them as could be obtained, that from such a History of Observations well ranged, examined, and digested, the true Original and Production of all those Kinds of Stones might be perfectly and sincerely known

* P. 111,
&c.

known *. All which Dr. W. hath now * P. 112. performed; and upon those Observations it is that all his Conclusions are founded.

The other Tract of Dr. Hook, to which L. P. refers, is, *his Conjectures occasioned by Mr. G. T's Observations made on the Pike of Tenarife, publish'd A. D. 1678, at the end of his Lecture explaining the Power of Springing Bodies*. But in the Choice of this Book L. P. is very unfortunate, for there is hardly any thing in it, but what is *Diametrically opposite* to Dr. W's Opinions. For instance; Dr. Hook attributes the Original of Springs and Rivers to Rain and condensed Vapours, p. 36, &c. Dr. Woodward, to the great Abyss, that huge Promptuary of Water in the centre parts of the Earth, shewing withal by what means the Water is derived thence unto them, *Nat. Hist. Earth*, part 3. Dr. Hook asserts not only that the Pike of Tenarife is the Product of an Earthquake, but that most, if not all, other Hills in the World were thus generated †. † P. 48. Dr. Woodward on the contrary, That there is not any Authentick Instance of any one Hill that was ever raised up by an Earthquake; giving withal a plain Account

count how they were really formed ; Part III, of his *Nat. Hist. of the Earth*. Dr. Hook saith, p. 48, 49. That most Islands have been thrown up by some Subterraneous Eruptions ; nay, and also the very Land which appears above the face of the Water : Dr. Woodward, That they were all formed at the Deluge, and have continued ever since in much the

* Part 2. same state wherein that left them *. Dr. Hook tells us, That most part of the Surface of the Earth hath been changed in its position and height, in respect of the Sea, viz. many parts, which are now dry Land, have been in former Ages cover'd with it ; and that many parts now cover'd with the Sea were formerly dry Land. Dr. Woodward quite opposite to this, That the Bounds of the Sea and Land have been more fixed and permanent † ; and, That there is a Providence presiding in the Government of the Natural World, that preserves the Earth, Sea, &c. from such Changes and Confusions || ; adding withal, that the Sea-shells, that were found in almost all Countries, first gave Ground to the Ancients to believe that there had been such Changes of Sea and Land ; in which they were follow'd by many modern Learned Men, and Dr. H. amongst

† Nat. Hist. Earth. p. 46, &c.

|| Ibid. p. 61.

amongst the rest ; whereas Dr. W. shews, that those Sea-shells were Remains of the Universal Deluge †. One † Ibid. p. 55, 65, & Seq. thing there is in these Papers of Dr. Hook which I do not, I confess, well understand : He says, That in certain Lectures which he read of this Subject in Gresham-College, which Lectures are not yet publish'd, he made it probable, that Earthquakes and Subterraneous Eruptions were the Causes of those supposed Changes : but at a little distance he adds, Unless we may be allow'd to suppose that the Water or fluid part of the Earth was wasted by being first raised into the Atmospheres in Vapours, and thence lost into the Æther : or unless this fluid part is wasted by the Petrification and Fixation of such parts of it as have fallen on the Land, &c. Or unless the Central Point of the gravitating power of the Earth hath removed, &c. whence would follow a recess of the Waters, &c. I know not, I confess, what these Lectures contain, further than the Dr. hath here (so very briefly) acquainted us ; but this is certain, that if in them he had really proved that such Changes were caused this way, I mean by Earthquakes, they could then never possibly be caused by any of the other three ways last assigned, these

these being as different from *that*, as they are from *each other*. I shall only add, That Dr. *W.* finding nothing in Nature that gives Countenance to any of *these ways*, but the quite contrary, for that reason recedes from them all; and *L. P.* is a very pleasant Person, to insinuate, That he has taken any thing from an Author to whose Doctrines he is thus totally opposite.

The next in order is *Nicholas Steno*. He printed his *Tract. de Glossopetris* (at the end of his *Canis Carcharia dissectum Caput*) along with his *Myologia Specimen*, at Florence, in the Year 1667; and his *Prodromus de Solido intra solidum naturaliter contento*, at Florence, in 4to, 1669. From *these two Discourses* *L. P.* would fain-perswade the World, that Dr. *W.* hath taken *All* that he hath set forth in his Essay; tho' at other times he charges him with the same thing, in respect of *Columna, Hook, Boccone, Grandius, Ray, Scilla, Ramazzini*, and indeed every-body that he had ever heard had written any thing on this Subject; but 'tis all one to him, he, good man! will willingly sacrifice his *own Reputation* to blast *another's*, and will freely be convict of *Contradictions* and

and *Inconsistencies*, so Dr. *W.* be but accounted a *Plagiary*. And, in reference to *Steno*, he is resolv'd to go thro' stitch with his Work: He calls Dr. *W.*'s *Account of Things, The Stenonian Hypothesis*, and this agen and agen; he recites *several Articles of it*, and attributes them *all* to *Steno*; nay, he can hardly get forth a Sentence without *Steno's* Name in it; thus, *The Hypothesis of Steno; Demonstrations laid down by Steno; Groundwork contriv'd by Steno; The main Argument that Dr. Steno fetches*; are all not only in the same Page*, but within a few Lines of each other; and presently after, *The Dissolution of the Earth, imagin'd by the Ingenious Steno; The Stenonian Hypothesis of Sediments; Sediments describ'd by Steno*. After the same rate he runs on in his other Letter†. So likewise here, in these *Additional Remarks*, he makes you say, That *the Origin of Mountains, from the Disruption and Changes of the Strata of the Earth, was Steno's Opinion*, p. 2. And we have agen *The Stenonian Hypothesis*, p. 3. To be short, he thus fetches in *Steno* and his *Hypothesis* a matter of Thirty times in the compass of a very few Leaves. Sure his Invention is very bar-

* Miscel.
Lett. p. 562

† *vid. Misc.*
Lett. p. 55;
etc.

barren, that he is forc'd to tire us over and over again with the *same Things*, especially too when he acted a different Part in every Tract he publish'd! But he is resolv'd to beat into his Reader's Head, that *Steno* is the Man to whom *Dr. W.* is beholden for all his Notions in his Essay, tho' on what Grounds he does this we shall soon see. And since such a great ado is made about *Steno*, I shall be a little more large in examining the matter between *Dr. Woodward* and *him*: and, for the Reader's ease, shall reduce what is alledged into some kind of Method, that he may not be fatigu'd with seeking it up and down, in that bungling Disorder *L. P.* hath deliver'd it.

Steno dissecting the Head of a large Shark taken on the Coasts of *Tuscany*: and treating of the Teeth of it, he takes occasion to enquire, whether the *Glossopetra* of *Malta* had formerly been the Teeth of Sharks, some asserting that they had, and others denying it; and, says he, the Controversie is not yet determin'd, whether they be the Teeth of a Fish, or Stones produced in the Earth†. From whence 'tis plain, whatever *L. P.* may pretend, that *Fabius Columna* had not clear'd this Point, his Tract. de *Glossopetris*

petris having been out above Fifty Years before *Steno* wrote this; and yet he here tells us, the Matter was not then determin'd. But let us see what he himself offers towards deciding this Controversie. He first premises a few short Observations about the Soil in which these Teeth and Shells are found: and then tells us, That these Fossil Bodies are very like to the Marine ones, there being no difference in the disposition of the Striæ, in the Texture of the Lamellæ, in the whirls or turnings of the Cavities, or in the Commissures and Cardines of the Bivalves: That there are Shells found broken, as also *Glossopetra*; and of the latter, several, of different sizes. Which truly is much the same with what *Columna* had said before. But because these Bodies being found at Land, it would be difficult to perswade the World that they were Real, unless it could be shewn how they might get thither, he proposes some Conjectures how that might come to pass. As,

1. That the Earth seems not to produce these Bodies at this day; and this because in soft Earth the deeper the Shells lye, the more tender they are, so that the Earth rather destroys than produceth them.
And

And for those found in Stone, they are all of the same hardness throughout the whole mass, and are beset with firm matter on every side, which will not yield to their growth; besides that, if it did, these must needs differ from those formed heretofore. But the Observations on which this Conjecture is built will not hold; so far from it, that the contrary is more generally true, especially as to the former part of it. For those Shells that lye deeper, are usually less tender than those that lye nearer to the Surface: Neither are the Shells found in Stone all of the same hardness; nor can I see why the Stones formed now should differ at all from those formed heretofore. And after all, were these things so as he imagin'd, what he infers would by no means follow thence.

2. That the Earth seems not to have been compact, when these Bodies were produced there. Which he founds on this; that the Roots of Trees which insinuate themselves into Stone-walls, Rocks, &c. are distorted and compressed; whereas he saith, These Bodies are all alike each to other. But this is so far from being so, that they are also very commonly found compressed, and many of them strangely distorted; of which Dr. Woodward

ward hath many Instances in his Collection. So that this second Conjecture hath no better a Foundation than his first.

3. That there is nothing repugnant, but that we may believe that this Earth (in which these Bodies are now found) was formerly cover'd with Water; That the Earth may have been changed in its situation by Earthquakes, &c. concluding, that in regard the Earth, wherein these Bodies lye, was formerly less compact, nothing hinders but that we may deduce that softness of it from Waters, &c. Yet he doth not determine whether this were done at the Creation, or the Deluge, or by Earthquakes; all which he mentions here. So that by what means these Bodies were brought hither, he is very far from clearing and determining; so far, that he doth not so much as determine in what place these Waters were, whether they were expos'd to the open Air, (as at the Creation and Deluge) or lay cover'd under a Crust of Earth, as those Waters do which are forced forth at Earthquakes. And therefore he leaves us as much in the dark as ever.

*Sive Aquæ
illa libero
aeri exposi-
ta fuerint,
sive terræ
crusta fue-
rint obdu-
ta.*

4. Nothing seems to hinder (he saith) but that we may believe that the same Earth (in which these Shells lye) was formerly

N

merly

merly mingled with Water : That there are two ways how a Solid may be sustained in Water, either in its Elements, or in the form of a Powder ; and then adds, That Particles may be convey'd to the Waters by fretting Juices and Steams, which come from the Bowels of the Earth ; by being carried up into the Air, there combined together, and then mingling with Rain ; and by Effluvia from the Bodies of Animals that inhabit those Waters ; and whose Bodies are after Death entirely, as it were, reduced to Water. But, besides that, he here fixes on none of these ways, indeed none of them would do the business. For from these Methods of making Sediments 'tis impossible to get a Stratum of a foot thick quite round the Globe. After all, these Particles he here speaks of are originally derived from the Earth, and consequently, when return'd back to it, they are but where they were before, and so cannot really augment it. But supposing by any, or all of these ways, a Sediment could be gain'd of two or three foot in thickness, which yet I cannot conceive could well be, what is this to those many and vast Strata that abound with these Bodies ? There are Shells found in all parts of the World, at the very
bot-

bottom of Mines and Quarries several hundred feet deep in the Earth, and, in short, to the greatest depth we ever dig†. But this (perhaps) was more than Steno was aware of. And here I may appeal to any Man, whether, if it were likely that Steno had known (as L.P. insinuates) any thing of that universal Dissolution of the Earth, and Minerals that Dr. W. hath since demonstrated, he would not here have declared it, when he was put to such miserable stress for Earthly Matter to make up the Strata, as 'tis evident he was. That Dissolution would have furnish'd him with Matter in abundance, and spared him the trouble of picking about, and mustering up Abrasions, Effluvia, &c. to little or no purpose. But 'tis manifest he never thought of any thing like it ; tho' of this more in its place.

5. He saith, *He doth not see anything that hinders, but that we may take the same Earth for the Sediment of Water compiled by little and little.* 'Twould be by little and little indeed ! Such a Sediment could not amount to the Ten thousandth part of what we now find ; and what this Gentleman offers is as far short of the matter as it is besides it. But he proceeds, to shew by what
N 2 means

† Nat. Hist
Earth, p. 16

means this Sediment might be compiled : *If, faith he, we believe the Water whereof we treat might receive turbid Water either from the Sea, or from Torrents, 'tis certain that the Bodies which render'd the Waters turbid ought, the violent motion ceasing, to sink to the bottom.* Here, we see, he never offers one word of Proof, but only guesses and supposes. We may easily indeed imagin, that on cessation of the motion, the Mud would sink ; but admitting *that*, what would this contribute to the Formation of Strata to the depth of several hundred feet ? Besides, tho' it be true that a little earthy matter might be thus taken by the rapid motion of the Water from one place, and devolved on another, yet that is very far from solving the Circumstances of these Strata, which are observed indifferently in all places, and with Marine Bodies in them too. These are found on the Sea-shores, and under the Sea, as far as Observation can be made, as well as at Land ; so that the bringing Mud from the Sea is far enough from solving the Phenomena. But Steno goes on ; *If, faith he, (instead of the former way) we believe the Water limpid, and that it contain'd solid Bodies* (he means small and imperceptible Particles)

cles) imparted to it by the Air, the Earth, and by Animals, neither in this Case is it hard to find out several ways, whereby the contained Solids might be secreted from out of the Waters. Of these ways he proposes several, as, the Cessation of the Impetus of the Materia Subtilis that buoy'd them up : the Exhalation of the lighter parts of the Fluid by little and little, the Particles contained in it sinking thereupon, as Salts do in Salt Water, and Tartar in Wine : a concourse of Different Fluids, the one precipitating the Solids that the other sustained, in like manner as Bodies dissolved by Acids are precipitated by the admixture of Alkalies. And, Lastly, That for those who contend, that any thing is formed out of any thing, and that Bodies change, &c. we may very clearly and distinctly imagine, that the Materia Subtilis, whilst it pervades the Air and Water, transmutes divers parts of these Fluids, enderred by little and little with a new Figure, into solid Bodies. And now I would fain know what it is that Dr. W. hath, that is like this : or indeed what it is to the purpose. Steno writes here more like a Chymist in his Laboratory, or one amusing himself with Speculations in his Study, than a Man that hath look'd into the Earth,

into *Mines and Quarries*, and duly inform'd himself of the Condition of things there; which indeed, as will appear by and by, he had not sufficiently done. Nor can any reasonable and inquisitive Man admit of his Conclusion, which is, *By all which ways if the Strata of our Earth were not compiled, yet 'tis certain they might have been compiled by those ways.* For a thorough Consideration of the *Matter of Fact*, of the *several Circumstances* of those *Strata*, and of the *Observations and Discoveries* which *Dr. W.* hath since made, will, I think, convince any one, that 'tis impossible the *Strata* should be compiled by any of *Steno's* ways.

After this follows *Steno's* sixth and last Conjecture, which is his *grand and concluding* Stroke, and for the sake whereof all that are before enumerated were advanced. For he foresaw no body would be induced to believe these *Marine Bodies real*, (the thing he proposed to make out) unless he could shew *what way* they were brought to Land and reposed in the Earth, as we now find them. How he has perform'd that, the Reader will easily judge. This sixth Conjecture is, That

no-

nothing seems to hinder, but that the Bodies like unto the Parts of Animals, which are dug up out of the Earth, may be reputed the Parts of Animals indeed: And then endeavours to confirm this farther, by telling us, That in Quarries or Caverns of the Earth, whence formerly Stones were taken forth, the Stone grows anew; and therefore he finds no Difficulty in accounting how so many Shells might be lodged in Stone. For he asserts, that the *Sediment* was composed but very slowly, and that the *Stony Corpuscles* subsided by little and little; so that none but those *Animals* that lay near the bottom (whether they were dead, or the Spoils of the dead, or alive, but unable to move) were cover'd by the new *Sediment*: But the other *Animals*, which were yet alive, and sustained above the said *Sediment*, would replenish the *Waters* with a numerous Offspring before a new *Sediment* was deposited there. Now, besides, that here is nothing but *meer Conjecture*, and nothing agreeable to Observation, I appeal to any one that hath read *Dr. W's* Book, whether it be possible to think he could borrow any of his Tenets from hence. *Steno* asserts, that *Stone* grows, and reasons from that: *Dr. W.* the quite contrary †. *Steno's* imaginary

† vid p.

110.

N 4

Sub-

Subsidence was so slow, that his *Strata* must have been *many Years a making and consolidating**, and

* *Longa annorum serie sensim indurescit, una cum dictis Corporibus, congestum Sedimentum,* are his words; so far was he from ever dreaming that these Shells were brought by the Universal Deluge, the *Strata* all formed then, and the Stone presently consolidated; all which Dr. W. evinces, *Nat. Hist. Earth*, part 2.

new Broods of Animals generated and grown between the settling of each Stratum: Whereas Dr. W's *Subsidence* was after the *General Dissolution* of the *Earth* at the *Deluge*; a thing which, 'tis plain, never

came into this Gentleman's Thoughts. What Confidence then doth L. P. discover and engage you in, Sir, to charge Dr. W. as a Borrower from this *Hypothesis*, which, you see, is totally different from that which he hath obliged the World withal! After this, *Steno* proceeds to argue something from the *Figure* and *Substance* of these Fossil-shells, that they are *real*; but the *Instances* he brings are not by any means *convincing*. The *Figure*, saith he, *answering most exactly to the Parts of Animals, likeness of Conformation seems to infer likeness of Original*; adding what he calls a *most evident Argument* of it, viz. that the *Shoots of Crystal, Cubes of Marcasites, &c. and other Bodies that concrete in a Fluid, are of Figures*
much

much more orderly than are those of Escallop-shells, &c. and yet in these Simple Bodies we sometimes see the Point of an Angle broke off, sometimes several of them growing together without any order, sometimes their Plains differing in bigness and situation amongst one-another, and several other ways, whereby they recede from their usual Figure. For greater and more Defects would be met with in Bodies of a much more compounded Figure, such as are those which imitate the Parts of Animals. For my part, if Bodies that are more orderly and regular, as he pronounces the Crystals, &c. (tho' whether they be really so, or not, is not my business now to consider) may be formed in the *Earth*, which he admits, I cannot see why he might not as well allow, that the Bodies which imitate the Parts of Animals as he speaks, which Bodies he thinks less orderly than the others, may not have the same Original, and have been formed there too. This I am sure, that the Argument he urges, and lays so much stress upon, is no more conclusive for those than it is for these; these Shells, Teeth, &c. being found broken and imperfect as commonly as those Crystals, &c. are; yea, and several of them lying together without any order, and they

they too *Differing in bigness and situation*, as well as *those*, which indeed he doth not deny ; so that there is nothing at all in *this*, which is his only Argument to induce us to believe that these Bodies ever belonged to the Sea ; and we need not wonder that he is so soft in his Conclusion, which is, That *the Figure of these Bodies doth not hinder, but that they may be reckon'd for parts of Animals* : This indeed none need stick to grant him, but then there is a vast difference between this, that *their Figure doth not hinder, &c.* and that *their Figure doth actually shew them to be, &c.* that, at best, being but a *Negative Argument*, and *these may be no Marine Bodies* for all that. Next he passes to their *Substance* ; and here what he urges, *viz.* that *their Substance is hard and heavy, like that of Stone* : What he hath of their *Pulverizing, Calcination, and burning to a Cinder*, I say, there is nothing in this that is *peculiar to Animal Substances*, or that will *distinguish* them from *Minerals*, which they may be, after all, for any reason we find here to the contrary. And indeed all he infers is, That *there is nothing in this but what may happen to the Parts of Animals* ; and, that *their Substance exhibits nothing*
con-

contradictory to his Opinion : Which we may grant him, and yet be never the nearer determining the thing in dispute. Nay, his *general Conclusion* and what he infers *from the Whole*, is only, That *neither in the Earth whence Bodies resembling the Parts of Animals are dug up, nor in the Bodies themselves, can there be any thing easily found that hinders, but these Bodies may be reckon'd for Parts of Animals* : Which is what need not be disputed with him ; but I am sure there's a vast *Difference* betwixt *this*, and *proving* that they have been really *Parts of Animals*.

All this, concerning the *Shells*, *Steno* calls a *Digression*, and at last comes to accommodate what hath been said to the *Glossopetra*, the Enquiry into their *Original* being his *prime and grand Design*, and what engaged him in all this. That they are *Sharks Teeth*, he argues from their *Figure* : And for their being dug up out of the Earth at *Malta*, Perhaps, says he, *that Earth lay formerly at the bottom of the Sea, and was an Habitation of Sharks, whose Teeth being heretofore buried in the muddy bottom, and the Site of that bottom being changed by the sudden firing of subterraneous Steams, they are now found in the middle of the Island* ;

Island; and therefore he concludes, that *they recede not much from the Truth*, who pronounce the larger *Glossopetra Sharks Teeth*. Now as to the Figure of these *Glossopetræ*, Dr. *W.* doth not so much as mention it, and therefore I hope he did not take that Argument from *Steno*; and for their being first buried at the *bottom of the Sea*, and that afterwards being hoisted up, and so made an Island, he is so far from asserting any such thing, that he says
P. 42, 52. the direct contrary, and that *this and other Islands had no such Original, but stand now as the Universal Deluge left them*; for then were *these Islands* formed, and *these Shells* repositied in the Soil of them: as this Gentleman hath already, and will in due time more fully and plainly prove.

And thus I have fairly represented what *Steno* hath offer'd in this Tract, wherein if his *Arguments* appear *defective*, and fall short of the purpose, he may in great measure be excus'd, because his *Observations* were but *few*, and he had not sufficiently view'd and inform'd himself of these things. He owns, That he had but once or twice seen those Grounds out of which are digged up
Predr. p. 3. Shells: That he had not the Knowledge of

of those things, that he might interpose his Judgment *; and therefore he desires, ^{* i. e. Ne Glossopetr. statim sub initio.} that what he shall pronounce of a thing so uncertain may be reckon'd as uncertain likewise; putting in a Caution, that his Reader may not promise himself many new things from this Tract, and so complains that he is frustrated of his Expectation. In fine, saith he, while I shew my own Opinion to be probable, I do not charge the Patrons of the contrary (i. e. those who deny those Bodies to be real Shells, and pronounce them *meer Stones*) with Mistake. The same Phænomena may be solved many ways; yea, Nature pursues the same End in her Operations by differing Means †. Upon the whole, I think no ^{† Ibid. sub fin.} one that ever read Dr. *W.*'s Book can ever really entertain the least suspicion, that he could take any thing, no, not so much as an Hint, from this Tract; nor will any go about to charge him with it, unless it be such as envy him the Reputation of being the first that ever set this matter in a clear light.

To proceed therefore to *Steno*'s *Prodromus*, and observe what Arguments he hath laid down in that Discourse to make out the Reality of these Bodies, this being the grand and chief Design of
this

See Prodr.
p. 2. Engl.
Æt. which
I shall fol-
low (where
it agrees
with the
Original)
because
L. P. shews
himself so
earnest for
it.

this, as well as the foremention'd Tract, and being likewise occasion'd by the Dissection of the Shark's Head, hinted before. And here his main and cardinal Proposition is, *If a Solid Body be every where encompassed by another Solid Body, that of the two was first hardned which in the mutual contact doth express on its Surface the Proprieties of the Surface of the other.* From this it is that he determines not only that the Shells, &c. lodged in Stone were hardned and formed before the Stone, and that whilst it was yet fluid, as he speaks, but likewise that Selenites's Marcasites, &c. were hardned before the Stone that contains them, &c. But this Proposition is so far from being so infallible a Test and Rule to decide this Controversie by, that it is scarcely it self intelligible; and we are left to conjecture only, to be inform'd, that by the one's expressing on its Surface the Proprieties of the Surface of the other, he means, expresses on its Surface the Form or Impress of the other. Nor now we have the meaning of it, are we ever the nearer deciding the Point in question, i. e. whether the Including or Included Body was first hardned. For instance; let us suppose an Escallop-shell
en-

encompassed with Stone, so as when the Stone is broken and parted from the Shell, it exhibits Ridges and Furrows alternately, and all exactly in the same manner as the Shell it self doth: In this case 'tis plain, no one can ever possibly determin by Inspection (according to this Proposition) which of the two was first hardned, in regard the Stone doth no more appear to express on its Surface the Proprieties, Form, or Impress, of the Surface of the Shell, than the Shell expresses the Proprieties of the Surface of the Stone; for their Surfaces are both alike: the one is ridged and furrow'd alternately, and so is the other; so that by this Rule 'tis impossible to find out which first hardned. For another Instance, let us take a Marcasite set round with Cubic Studs, as usual, and those Studs all of the same size, and each distant from the other just a Diameter of one of the Studs, so that the Body should be distinguish'd with Cubic Studs and Cubic Caverns, of like size, alternately. Now supposing this Marcasite encompass'd with Sand-stone, so as when that is broken and severed from the Marcasite it exhibits Cubic Studs and Cubic Caverns alternately, just as the Marcasite it self doth; How shall we know by

by this *Test* which first hardned, the *Marcasite* or the *Stone* : or which of the two expresses on its Surface the Proprieties of the Surface of the other ? And as this Proposition is far from determining which was first hardned of Bodies thus contiguous to each other, so as far is it from determining whether both did not harden together, and at the same time. Thus to instance in a *Walnut*, which is properly a *Solid* in his sense, he using

*vid. Prod. that word only in opposition to *Fluid* *.

P. 15, 34. In this Body the surface of the *Kernel* expresses the Proprieties of the inner surface of the *Shell* : as this doth the Proprieties of that ; when yet neither was hardned before the other, but both formed together. There might be a thousand *Instances* of Matter of Fact brought against this Proposition, but from what hath been already said it appears sufficiently, that tho' *Steno* lays that mighty stress upon it he does, and even deno-

† De solido intra Solidum naturaliter contento Dissertationis Prodromus.

minates his Book from it †, yet it proves just nothing at all : Or indeed, if it prove any thing, it must be the direct contrary to what he brought it for, as he hath laid it down. If says he, a *Solid Body*, suppose an *Escallop Shell*, be every where encompassed by another *Solid*

lid Body, suppose a *Stone*, that of the two was first hardned, which in the mutual contact doth express on its Surface the Proprieties of the Surface of the other. Now 'tis most apparent that the *Stone* bears the Impression, or expresses on its Surface the Proprieties of the Surface of the *Shell*, and consequently, according to this Proposition, the *Stone* was of the two first hardned. Nay, I could deduce a still greater Absurdity from it, but I forbear, what hath been shewn being I hope sufficient. His second Proposition is, if a *Solid Body* be like another as to its Surface, Constitution, &c. then will it be like it also as to the manner and Place of its Production, &c. But this, I think, I need not spend time in Examining, since *Steno* offers nothing in proof of it, nor will L.P. * himself admit it by any means. What he hath pag. 81. & Seqq. about the agreement of the *Fossil-shells* with the *Marine ones* in their Threds, Plates, Hinges, &c. is nearly the same with what was recited out of his *Tract de Glossopetris* above : besides, I shall have occasion to say something more on the same Head anon, so that I shall dismiss it for the Present. And thus much for *Steno's* Arguments for the Reality of these Bodies.

*vid. Two Essays from Oxford. p. 40.

O In

Pag. 4.

In the next place, let us enquire by what means Steno imagined these Shells, &c. were brought to the places, where they are now found. And in these Additional Remarks, L. P. makes you say, that he supposes them Remains of the Deluge lodged in several Layers, Beds and Sediments; and consequently Dr. Woodward is to be accounted but as a Copyer of the Notion after him. The falsehood of which appears even from what hath been already brought out of Steno. And tho indeed it be true, that in the Notes on his Third Conjecture, he mentions the Waters that over spread the Earth at the Creation and Deluge, as also those of Earth-quakes, yet he fixes on none in particular, nor doth he there aim at any thing more, than to intimate that the Earth, wherein those Shells are found, hath been under water. But if L. P. find but the word Deluge, 'tis enough for his purpose, and he can easily make what use of it he pleaseth. Yet so far is Steno from reckoning these Shells to be the Remains of the Deluge only, that in his Notes on his 6. Conjecture, he supposes them genera-

† vid. Etiam Prodr. p. 22.

ted in the very places where they are now found, † which he imagines were then under

under the Sea. And elsewhere he makes them Relicks of Inundations of the Sea, and I know not what Eruptions of Mountains, without acquainting us how, or when, but only in General, that the Sea had been there one time or other, in what manner soever it got thither, whether by its own overflowing, or by the Eruptions of Mountains. † In a word, Steno's opinion is, † Pred. p. That the Sea hath been out on the 40. Earth at several Times, when it left these Productions of it behind. * Nay, * Pag. 3. he will have it, that one Particular 96. & sequent. Shell, which he instanceth in, was first by the Sea left upon the Land, and afterwards carried back into the Sea, and then at last left by the Sea again at Land. † † Pag. 87. The vast Bones digged up in the Aretine Fields (which in all probability were the Bones of some vast Marine Animals, left behind by the Deluge, such not being uncommonly found both in Italy, Germany and elsewhere) he fancies were the Remains of Elephants and other Beasts, brought by Hannibal out of Africa, which perished there, and were afterwards covered by matter devolved from the circumjacent Mountains by the impetuosity of Torrents. 'Tis true indeed, that he thinks some of these Shells, O 2 &c.

&c. were remains of the Deluge; But he offers *but one Argument* for it, and that not at all convincing neither: This is, *That in the Stones about Volaterra, which are remainders of very Antient Walls, there are found all sorts of Shells, as also in the Hillock whereon they are raised.* But he proves not that these Walls were the *most Ancient or First Walls* of that City; or allowing that he had, he proves not that *even* they were built *near the time* of the Deluge: Nor indeed is it at all probable that they were, by many hundred of Years. So that the sum of all that Steno hath upon this Matter is; that he supposes over and over these Shells to have been brought to Land by *Particular Inundations*, and *other means* than the *Universal Deluge*; and tho he be inclinable to believe that *some of them* might be left there *at that time*, yet we see he doth not prove it by any direct and conclusive Argument: Nor does it appear from what he hath laid down, that so much as any *one single Shell*, of all the *vast multitudes* yet in being, was left at the Deluge.

P. 90. 91.
 &c.

And as this last Charge is false and Precarious, so is also the next, *viz. That*
 Dr.

Dr. W. took his Account of the Causes of the Deluge from Steno. For say you, *Steno* Ad. Re-
no places about the Central fire of the Earth marks p.
an huge Sphere or Abyss of Waters, which 2.
supplies the Earth with Springs, and the
Air with Vapours, and was sufficient for
the General Deluge, when by the force of
the Subterraneous Fire it was forced or
thrust up. Now Steno hath not any where the *least mention* of an *Abyss*, tho Dr. Woodward hath put the thing beyond dispute. Moses indeed, and other *Antient Writers* had spoken of it before: but it was Dr. Woodward that gave the first *Physical Demonstration* of its existence; and shew'd its *many and wonderfully great uses* in the *Natural world*. All that Steno hath that looks like it is in P. 102. of his *Prodromus*. Where he asks *who hath searched into the Structure of the Bowels of the Earth, so as to dare to deny that there may be vast spaces now filled with an Aqueous, at an other time, with an Aerial Fluid?* But there is I presume a great deal of difference betwixt a *bare Conjecture* that *there may be*, and a *substancial Proof* that *there actually is* a Collection of Water in the *Bowels of the Earth*: and 'tis plain, this is far enough from being a description of such an Abyss

P. 104. as Dr. Woodward sets forth. 'Tis true Steno speaking of the Deluge, saith, That for the manner of the encrease of of the Water, we may alledge many ways suitable to the Laws of Nature. But of these many he mentions but three, proves none; nor indeed does he fix or abide by any of them. And after all none of them are the true way; or that whereby Dr. Woodward hath asserted that the Deluge was really brought on. And I am enclined to think that no one that ever seriously considered and weighed the matter throughly, will judge that Steno could assign any way for the Universal Deluge, that is suitable to the Laws of Nature. For such a way is flatly repugnant to the Account of Moses, who makes the Deluge to be effected by the immediate Hand and Power of God † for the punishment of that wicked Race of Men, and the Destruction of that Frame of the Earth. Steno's ways are 1. An Emotion of the Centre of Gravity, which Dr. Woodward expressly opposes *. His second way I shall transcribe entirely; it being that which L. P. refers to in these Remarks. Says he, with the same ease may be explained the General Deluge if we place about

† Gen. 6.
seq. vid.
Dr. W.
Nat. Hist.
Earth, Part
II.

* Nat. Hist.
Earth Part
I.

about the fire in the middle of the Earth a Sphere of Waters, or at least certain Receptacles of them, whence the pouring forth of the included Waters, may be deduced. We see here that Steno is far enough from asserting that this Water would be sufficient for the Deluge; (tho L. P. † expressly avers that he doth assert that) he never goes about to estimate the Quantity of it: So far from it that he doth not prove that there is one drop there; for this is but a bare supposition; and truly such an one too as is hardly possible, i. e. that a Sphere of Water can exist over an Orb of Fire: And I'm sure Dr. Woodward asserts nothing like it. Nor doth the third way he mentions agree at all with what the Dr. hath on this Head: Steno supposes here a falling in of Fragments of the Earth, so as to obstruct the Passages whereby the Sea penetrates to the Heads of Springs, thro which the Waters came, as well as thro the Pores of the not yet drowned Earth, the Water inherent in the Air falling down in the mean time in Rain: That the Bottom of the Sea was raised up by the dilated Caverns under the Earth; That the Cavities on the Surface of the Earth were fillen up with Earthy matter,

Prodr.
Pag. 104.

† Addit.
Remarks.

worn off from the higher places by rains : That the Surface of the Earth was then less unequal than now it is, &c. All this he desires to have granted him, without offering one Tittle in Proof of any of it, and then he thinks he has a natural way of the Deluge ; with what Reason let the Reader judge : as well as how little consonant it is to what Dr. W. hath delivered.

Before I dismiss this matter, give me leave, Sir, to shew you another instance of the Honesty and Sincerity of that Worthy Gentleman, that made you Father these Remarks. For he tells us that Steno makes the Abyss supply the Earth with Springs, and the Air with Vapours. I have noted already that Steno never so much as mentions the Abyss. Nor hath he one word about the Origine of Vapours any where. And for that of Springs, he determines nothing at all about it. Tho in one place indeed he seems enclined to believe their Rise is from the Condensations out of the Upper Air : And in another, viz. the last cited passage, he supposes them supplied from the Sea. Both which ways are as far from that which Dr. Woodward hath assigned, as they are inconsistent with each other. But L. P. will make

make Steno say things he never so much as dreamt of at any time, if he can but thereby insinuate that Dr. Woodward took them from him : Nor is this, by many, the only Instance of the Improbability of this Trifler.

The next charge, is, that the entire Dissolution of the Earth, Metals, Minerals, and all Terrestrial Bodies whatever, that happened at the Deluge (which Dr. Woodward hath so Substantially made out, and also assigned a very satisfactory reason to what purpose so Universal a Dissolution was then wrought,) was Originally Steno's notion : And that Dr. Woodward only Borrowed it from him. This is asserted in many Places of the Miscellan. Let. as p. 55, 562, 563, 564. &c. and in these Addit. Remarks, p. 5. But than this Bold assertion, nothing was ever more false and groundless. For Steno never so much as hints at any such thing ; but on the contrary lays down several Positions that do directly thwart it, and give the fullest and clearest proof that he had not the least Thought of this Dissolution. Some of these I have mentioned already in my Notes on his 4th Conjecture. Nay I have elsewhere shewn that Steno was of opinion many of these Shells

Shells were generated in the Places where they are now found: That others of them were brought in by particular Inundations: And that he has not proved that any of them were left by the Deluge; so very far was he from having given any Proof, from these Shells, that there was such a Dissolution at the Deluge. To which I shall here Subjoyn what he hath under his 3d. Conject. The Sense of which is that Although the Earth be Shockt, Torn and hurried about in Earth-quakes, and the Parts of it made to change their former place and site; yet in the Deluge and at the Creation, tho the Earth was covered over with Water, yet the Parts all the while retained their former site. Now Dr. Woodward proves that at the Deluge, there was a great hurry and confusion of Terrestrial Bodies: A great change of the Site and Place of many of them: and infinitely superiour to whatever happens in any Earth-quake; which had Steno known any thing of, he could never have said that at the Deluge the Parts of the Earth did not Change, but retain their former Site. So also in his Prodr. speaking of the Antediluvian Mountains, he says, whether they were the same

vid. Part 2.

† P. 101.

same Mountains with those of this Time, neither Scripture nor Nature decideth. Had Steno known that those Mountains were totally dissolved and destroyed, how could he ever have made any doubt whether these now standing were the same with those or not? But Dr. W. hath since put the thing beyond doubt, and shewn that both Scripture and Nature do decide this, and agree that there was such a Dissolution; so that 'tis now plain our Mountains can never possibly be the same with those. Again, Steno asserts that there are of those very Terrestrial Strata which were formed at the Creation still actually in being: And lays down Rules how he thinks these are to be distinguished from those that he imagines to have been since accumulated by the Sea, Rivers, Torrents, &c. For says he, If in a stony Bed all the Particles be of the same nature, and withal fine, it cannot rationally be denied that that Bed was produced at the Time of the Creation. † What can be plainer, than this Instance, that Steno knew nothing of an Universal Dissolution of the Earth at the Deluge? But what puts the thing out of all dispute, is that he tells us expressly, that he could not find out by any means, what effects

P. 39. & 99. of his Prodr.

† P. 39.

fects the Deluge really had on the Earth. Says he, what did happen in the Surface of the Earth, whilst it was covered with Water, neither Scripture nor Nature declareth; this only we may affirm from Nature that deep Vallies were then produced. This deepning of the Valleys was the only effect it seems he could hit upon. And this is directly repugnant to what he had laid down but four Pages before. But he advances it purely because he could not find Water enough in all Nature to make such a Deluge as Moses sets forth, had the Antediluvian Vallies been as deep and the Mountains, as high as they are now. Nor indeed after all, does he seem to believe the Water rose so high as to cover the highest Mountains (which yet is contrary to the Mosaick History of the Deluge) he asserting that the Beds of the higher Hills contain no Shells or other heterogeneous Bodies at all in them; which is a great mistake: Dr. W. having by him several very authentick Accounts of Sea Shells found to the very Tops of the highest Mountains of Asia, of America, and in Short of the whole known World. More might be produced, but I think from what is already laid down

Pag. 105.

vid. Page 102. 103, & 105.

Pag 99.

'tis

'tis clear *Steno* never had the least Notion of any Dissolution of the Earth at that time; nor indeed of many other effects of the Deluge, which Dr. *Woodward* hath since so happily advanced. Pray then, Sir, consider how basely injurious you are to the Performances of this worthy Gentleman, in so groundless ascribing to *Steno* what is incontestably owing to Dr. *W's* Discovery; and what indeed *L. P.* himself had formerly acknowledged to be his; which I have taken notice of before.

vid. Two Essays, p. 9. 13, 42.

'Tis with much the same degree of Truth and Sincerity, that the Author of *these Remarks* tells us, That *Steno* hath shewn that the *Strata* of our Earth were form'd at the *Deluge*. That you may see how lik, what he here brings is to the usual hobble of *L. P.* take it in his own inimitable words. *The Re-settling or subsiding of Bodies as well Terrestrial as Marine, (dissolved or mixed with the Waters of the Deluge) according to the Laws of Specifick Gravity, in their several Strata or Beds of Stone, Sand, Clay, Marl, Slate, Lime, Chalk, &c. was published above 26 years ago by Nich. Steno, and Agostino Scilla: He had before, in*

his

his *Extract*, and *Letter*, blundered out much the same thing, as the Reader may see if he please to peruse those *Incomparable Papers*. And the design of this is to insinuate that *all* which Dr. *W.* hath on this Head is also taken from *Steno* and *Scilla*. The Latter I shall consider below; and as for *Steno*, to what may be collected from what hath been said already, I shall add that 'tis plain he was so far from ascribing the Formation of the Strata *Solely* to the *Deluge*, (as Dr. *Woodward* hath done); That he assigns *many other Causes* of them, and those too very different from each other, as the *Water* which overwhelmed the Earth at the Creation: *Exundations of the Sea: Eruptions of Mountains: Overflowing of Rivers: Falls of Torrenis: Eruptions of Fire: Impetuous Rains, and Tempests, &c.* Prodr. p. 39, 40, 41. He likewise imagines those Strata formed at *several times*, and those *vastly distant* from one another. Nay, he pretends to make an Estimate of the *Number of those times*; and will have it that not only *Tuscany*, where he then dwelt, but the *whole Earth* hath undergone *Six several changes*. † Which Dr. *W.* is so far from copying after, that he hath directly

P. 3. &c.

* P. 98. 99. &c.

ly opposed and refuted this Notion. *Nat. Hist. Earth, Part I. &c.*
 This *Additional Remark* also values himself much on discovering that Dr. *Woodward* stole his Notion of the settling of all Bodies at the time of the *Subsidence* in the *Deluge*, according to the order of their *Specifick Gravity*, from *Steno*: and which is a thing he never did but once before, and then he did it falsely, * he cites you the passage too out of *Steno*; which I shall give in the Author's words, viz. * Addit. Remarks.
The greater Bodies (says Steno) contained in the same Beds, do for the most part observe the Laws of Gravity, both as to the site of each Body by its self and as to the site of various Bodies amongst themselves. Now that Dr. *W.* could take nothing of this from *Steno* is most apparent, because the Dr. asserts, not only that the *greater Bodies*, but greater and less, and *all indifferently*, subsided according to their *Specifick Gravity*: And this too not only in the *same Beds* but in *different*; yea even *all the Beds themselves*, and the matter whereof they consist, as well as the *Shells*, and other heterogeneous Bodies contained in them, subsided in the same method. But no wonder they differ so much; since Dr. *W.* asserts *all the Strata* P. 38. of his Prodr.

Strata were compiled at *one time*: *Steno* that they were compiled at *much distant times*, as well as by *different means*. The truth is, if Dr. *W.* took any thing from this Paragraph of *Steno*, he has quitted himself well, and shewn he's a Man of great Penetration; for I think it perfectly unintelligible; neither can I possibly, nor indeed any Body I could ever meet with, tell what *Steno* means by *their observing the Laws of Gravity both as to the Site of each Body by it self, and of various Bodies amongst themselves*; but perhaps *L. P.* who has given such strange Proofs of the *brightness* of his *Understanding*, and how *profoundly sagacious* he is, may unriddle the matter to us. This I am sure the *English Editor* renders the Passage faithfully, and just as 'tis in the *Original*. And after all, tho *Steno* makes use of the *Expression*, whereon *L. P.* builds so much, *viz.* the *Laws of Gravity*, yet 'tis certain he uses it at random, and does not mean that even *the greater Bodies in the same Bed* ly according to the order of their *Specifick Gravity*, *i. e.* those which had the *greatest quantity or Degree of Gravity* lowest, those that had a *lesser Degree* of it above them,

them, and so on in their several Courses; but only *the biggest* or *most ponderous* lowest, and the *smaller* and *less ponderous* ones above †. 'Tis true † which he leaves us perfectly in the Dark as yet has no warrant to his meaning, and does not explain from Observation: himself here: But by conferring this Passage with what he hath, treating nor are the of the same matter in his Notes on Bodies found ly- *Conject.* 5. it appears he meant nothing ing in that order. less than the thing *L. P.* pretends; he there using only the words *graviora, minus gravia, and levissima*. So likewise in his *Prodromus* * *matter* * P. 41. of *different Gravity*: *Bodies heavier*: and *lighter*. But what puts this quite out of dispute is that in his Notes on *Conject.* 6. Speaking again of the *same subsidence* he has this Passage, *Cremoris instar concrefens saxea cuticula, ubi gravior reddita fuerit, fundum petat*. For tho indeed upon such a Concretion of Sands the *Aggregate* would be *more ponderous*, yet 'twould not be *specifically heavier* than before, in regard that one single Grain of Sand would have as great a Degree of *Specifick Gravity* as the whole *Aggregate Concretion*, nay, as ten thousand grains of the same Sand, or as many more as we please. So that 'tis most manifest that

P *Steno*

Steno had regard only to *Bulk* or *simple Gravity*, and not in the least to *relative* or *Specific Gravity*.

Miscel.
Lect. n. 23.
P. 36.
P. 45. of
his Pro-
dromus.

So also for the Mountains of the Present Earth, *L. P.* will needs have it that *Steno* hath shown the *Origine* of them, from the *Change, Elevation and Disruption of the Strata*; and consequently *Dr. Woodward* can say nothing on this Subject, but at second hand from him. *Steno* indeed urges a few Arguments, to shew that the changed situation of Beds, is the chief original of Mountains; whereof some are conclusive, others not at all. But what is this to the manner how those *Strata* came to be *Elevated*, and the Causes of the Origin of our Present Mountains? That the Earth consists of *Strata*, and that *Hills* are the *Elevation* of these *Strata* is what we need not go to a Philosopher to be informed of: Any Man's observations will soon convince him of that; But that which an Inquisitive and Curious Person would desire to know is *how* that *Elevation* was produced; what was the *Agent*, and what the *time* when they were formed. This is what *Steno* is far from determining; tho *Dr. Woodward* hath happily and successfully done it: and

and cleared the Point, beyond exception, to all unprejudiced understandings. Besides nothing can be more different than *Steno's* and *Dr. Woodward's* Opinions in this Point; the Doctor hath put it beyond contest, that the Mountains now standing were all formed at one time, viz. at the latter end of the Deluge: whereas *Steno* imagined that the Beds did not change their site at the Deluge. Nay, he could not determine whether many of the Mountains of the present Earth were not standing before the Deluge. He believes also many of the Present Hills to be formed at different Times, by I know not what sinking down of Beds: by the Eruption of Waters, and exustion of Fires: by the Impetuosity of Rains and Torrents: by the accension of Subterraneous Exhalations, Earthquakes, &c. Nay, and offers all these means without giving the least Proof, or so much as one Instance, of any one single Mountain formed by any of them. In short, *Dr. W.* hath laid down enough † to convince any reasonable Man, that these are none of them the true means; and therefore 'tis very strange he should be thus charged with copying them from *Steno*.

vid. Con-
ject. 3.

vid. Prodr.
P. 101.

Prodr p.

P. 43, 44,
45, 47, 103
107. and
Conject. 3.

† Nat. Hist
Earth P. 1.
& 2.

Addit. Re-
marks p. 2.
and Miscel-
lany Let.
p. 562.

Next we are told That the Perpendicular and Horizontal Fissures dividing the Strata of Sand, Gravel, Clay, Stone, &c. Are with great care and Accuracy described and delineated by Dr. Steno, in his *Prodromus*. But this is another convincing Instance of L. P.'s Insincerity: For Steno is so far from having described them with great Care and Accuracy in his *Prodromus* that in all that Book he never mentions one word of either the Perpendicular or Horizontal Fissures. Indeed in his *Traët De glossopetris* he hath one passage about the Perpendicular, but as for the Horizontal ones, he never so much as once names them in all his Writings. That Passage is *In terrâ argillosâ vidi eadem strata collore inter se discrepantia variis in locis fissa esse, & fissuras omnes unius coloris materiâ plenas, ad ipsa strata, quasi perpendiculares esse* †. He hath not one word more on the Subject any where, only he adds a little after, that these Fissures are caused by Earth-quakes, which Dr. W. hath I think sufficiently refuted. The truth is, had Steno, as L. P. would persuade us, asserted that Clay, Gravel and Sand were divided by such Fissures, it had been a very gross blunder and mistake, and indeed, such

† Conject.
3.

such an one as no Man that ever looked into a Gravel or Sand Pit, &c. could well commit. Nay, no Man of any Quickness of Thought and Apprehension but must, tho he had never looked into the Earth, easily have concluded that there could not be any such Fissures in loose Matter, such as Sand and Gravel is: In regard That Matter would necessarily tumble and fall into them and so fill them up. And 'tis for this very Reason, that (as Dr. Woodward hath taken notice) these kind of Fissures are not observable in the Strata of Sand, and other loose Matter, tho they are in Marble, Stone, and the other more solid and coherent Matter. In brief, this is what only such a Naturalist as L. P. and such a Thinker too, could ever have stumbled on. But he has been so long vers'd in Arguments bottom'd only on Sand, in making Ropes of Sand, and other like employ, that 'tis no wonder he should thus dream of Fissures in the Strata of Sand.

Nat. Hist.
Earth p.
12.

vid. P.
above, as
also p. 216.

'Tis by the same very extraordinary Person that we are told that Steno solves the Phenomena of the Fossil-Plants. And indeed Steno tells us, That they resemble true Plants, or differ from them in colour and weight; adding, that it is not to be doubted that once they were true

Miscel. Let.
p. 54.
p. 93. of
his Prodr.

Plants, the Texture of the Bodies themselves evincing it, and the condition of the place where they are digged not disagreeing thereto; which is all he hath to the Purpose on this Subject. For those he speaks of resembling true Plants in Colour, I am perswaded they were few, if any; and for my part, I could never yet either see or hear of so much as one: Nor is it likely that any should preserve their Colours so many thousand years under Ground, as Dr. W. hath shewn these have lain; so that 'tis well if Steno was not imposed upon in this matter. And if they be all altered in Colour and Weight, I cannot possibly see how they could preserve their native Texture; since 'tis plain that the Metallick and Mineral Matter that insinuated it self into the Bodies of these Plants, so as to alter their Colour and Weight, must needs make some alteration in their Texture. Nor can I better see how the condition of the place whence they are digged can be said not to disagree, &c. it being most evident that that is not natural to them, and therefore doth really disagree, and would be an Argument against their Reality, were it not that that is clearly evinced by other Proofs, and the circumstance of their place likewise accounted

counted for. If this be solving the Phenomena of the Fossil-Plants, as L. P. phrases it, Steno hath indeed solved them. But else, he tells us not in the least of what sorts these Plants are: in what Countries they are found: in what Numbers: whether with all their Parts, Leaves, Flowers, Fruits, &c. or not: in what kinds of Terrestrial matter they are lodged: in what manner they lye: how long they have lain there: how they were preserved all this time: or how they came into that condition; with many other things. So that Steno hath left us almost as much in the dark as before; yea L. P. on another occasion tells us himself that there are many strong Arguments and Invincible

Objections against what he hath delivered here.

Miscel.
Let. p.
554 Add.
Remarks.

And here because I will not omit any, no not even the most inconsiderable Article of this Charge (that the world may the better judge of the Justice of it) I shall mention what L. P. alledges about the Impressions or Mouldings of shells, tho indeed there be very little in it. The Passage is expressed in his usual manner, and therefore I will give it in his own words. He tells us that Steno fetches an Argument that our Globe hath

been all covered, dissolved, &c. from the number and variety of Sea Shells, parts of Animals and Vegetables all lodged and embodied in the several Subterraneous Solids (Sand, Gravel, Clay and Stone are all he mentions, tho certainly Sand, Gravel and Clay are very odd Solids) either really in their true natural Substances or Textures, or else in Delineations, Figures, Impressions or Mouldings. To the dissolution I have spoken already, and demonstrated that Steno had never any such Notion. And for the Mouldings or Formations of Stones, bearing a Resemblance of Sea-shells, in the Cavities of those Shells; what Steno hath is only, That the dusty matter of the Beds hath so accommodated it self to the Bodies contained, that it hath filled every small Cavity of them, and expressed the Smoothness and Brightness of the same Bodies in that part of its Surface where it toucheth them, tho the Roughness of the Dust answers not at all to such a smoothness and gloss. Now whereas Steno makes mention only of Dusty Matter intruded into Shells: as Columna before him of Earth turned into a Stony nature: Dr. Hook of some kind of Mud or Clay, or Petrefying water, or some other substance

vid. Miscel.
Lect. No. 22
P. 562.

vid. Prodr.
p. 38.

De Purpura
C. XI.

Microgr.
p. 111.

in

in tract of time hardened, &c. Scilla † of † P. 54. conglutinations of Mud consolidated, tho elsewhere * he saith he knows not * P. 140. whether it were Mud or not; Dr. Woodward shews that these shells are sometimes filled with Earth, Clay, Marl, Chalk, and the like: Sometimes with Sand-stone, Ores of Metalls, Flint, Sparr, Native Vitriol, Sulphur, and other Minerals: And proves that the said Sand-stone, Metalls, Flint, Sparr, &c. were all totally dissolved and reduced to their primary constituent Corpuscles: That these being sustained in the water together with the Shells, the said Metallick, Flinty, Sparry, and other Mineral Corpuscles, insinuated themselves into these Shells, till they had filled up the Cavities of them, concreting or hardening therein (not in tract of time, but) at the instant of the Accretion of the Corpuscles, the said Shells by that means serving as Proplasm or Moulds to the matter that so filled them, limiting and determining both the Dimensions and the Figure of it, so that it represents the Cavities of the Shells in which 'twas thus cast or formed with a wonderful exactness; many of these Stones, Flints, Ores, &c. having taken the Impresses of

of the *Insides* of these Shells with that *exquisite niceness* as to exprefs even the *smallest* and *finest* Lineaments of them : with much more upon the same Subject, which I had rather the Reader should peruse in the Book it self. Besides, that he hath in his *Collection of Fossils* a vast number of shells of *all most all kinds*, filled with *Flint, Spar, Stone, Metallick and mineral matter, consolidated*: as well as *Flints, &c.* freed from the shells, and bearing on their *Surfaces most exact impressions* of those shells; these giving *Ocular demonstration*, and even *evidence of sense*, the highest and surest that can be, of the *Truth and Certainty* of what he asserts. But for *that*, indeed I need not refer so much to his *Museum*, as to the *Earth* it self, to *Rocks and Quarries, Mines and Cole-Pitts, &c.* which do every where attest this *Dissolution*, and demonstrate the *Truth* of the *Matter of Fact*. Thus have I run through every Article of the Charge against Dr. Woodward, for borrowing from this Author : And have I think effectually shewed the unfairness and falsehood of it ; and if the Reader please but to compare *Steno's Tracts* and the Doctor's together, he will find them as different

from their *Opinions* as could well be. To what hath been already noted, we may further add, that *Steno* believes that there hath been since the Deluge, *great changes of Sea and Land*.^{P. 108.} That *Malta and other Islands, have risen from the bottom of the Sea*: That the Shells and other *Marine Bodies, found at Land, are Arguments of these changes*: That the *Salt digged up at Land* was left behind by the Sea : That there are found *planks of Ships* left by the same: That there are *new Lands formed out of the Earth, carried down into the Sea by Rivers*: That the *Strata of Stone* owe their *Solidity*, either to the *Springs of Petrifying waters, or Subterraneous Streams, or the heat of the Sun*: He admits that Shells are found *only in the Mountains and higher grounds*, (having it seems never met with any in the *lower*, so very defective were his Observations ; tho he conjectures that there may be notwithstanding Shells in the *Lower grounds*, but thinks them buried and hid by the *Earth*, which is born thither down from the *Mountains*): which yet he afterwards contradicts, asserting that the *Beds of the higher Hills contain no shells, or other Heterogeneous Bodies at all* ; and this with de-

P. 103^e
105, &c.

† *vid.* Con-
jecture 5.
* *Prod.* p.
33.

vid. p. 50.

* P. 35. &c.

P. 37.

P. 24. 54.

sign to prove that these *higher Hills* are the *primitive ones*, or *those which were formed at the Creation*: Whereas he as much *thwarts even this* elsewhere, in declaring that the *Surface of the Earth was less unequal*, or the *Mountains not so high before the Deluge*, as are *many of those at this day standing*, but this shift was that the less quantity of water might serve for the Deluge, he not being able to find enough in *all Nature* to drown the Earth to the height of the *Present Mountains*: That the *Stalactitæ* or *Sparrey Icicles* found in *Grotto's* are not formed of matter proceeding out of the *Stone* whereon they hang, nor secreted out of *water*, but meerly out of the *Air*: † That all sorts of *variegated Marble, Granites and Metallick Plants* are only *Repletions*, * *filling up the places of Bodies consumed*. That the *changed site of Beds* hath occasioned all sorts of *variegated Stones*: That *Agats and other like Bodies* were formed in the *Strata of Stone*, and therefore they usually express the *Roughness* of it on their *Surface*: That the matter of those *Bodies seems to exhale out of the Stone*: That *Chrystal* seems not to have been produced in *water*: That *Chrystals* (all sorts without any distinction,

tion, tho from Dr. *Woodward* we learn that they differ both in the *Time* and *Manner* of their formation) are *coagulated after the Production of the Beds*: *Pag. 71.*

That *Chrystal* (all again indifferently, tho it be demonstrable that *That* he describes, as well as *several other sorts* of it, was not formed so, it wanting the *Root* or *mark of Adhesion* †) *encreaseth* † *vid. Nat. Hist. Earth.* *leaning upon, or fixt unto a Solid*: * That the *Chrystals* now lodged amongst the *matter of the Strata*, grew originally *in the Cavities* of those *Strata*, being afterwards broken off and lodged in the *Strata*; to pass over very many *Instances* of like nature that might be collected out of the *Writings* of this Author, all as different from what Dr. *W.* hath laid down, as they are from *Nature* and from the *true State* of things. In a word, whoever considers what *Steno* hath, p. 94. of his *Prodr.* will soon see how very defective his *Notions* were about the *true origin of Metals and Minerals*, and how wholly he was in the *Dark*, as to that matter. Nor need any Man after this wonder that *Steno* himself should acknowledge that he was full of *Doubts* and *Perplexities*, yea, even *wandering in a Labyrinth*: And after all pronounce this his *Prodromus a tumultuary* *P. 4.*

multurary Relation, tho *L. P.* out of I know not what invidious perverseness makes such an *Oracle* of it; neither is it any dishonour to *Steno*, tho a person of great diligence and curiosity, that he did not so happily succeed in *this*, as in his *Anatomical* and other *Undertakings*, since 'tis plain from the *whole*, that he wanted both *Time* and *Opportunity* for *Sufficient Information* of himself in these matters, when *very many*, and several of them *great Men* too, and who wanted *neither*, had miscarried before him, and fail'd of Success.

Agostino Scilla, is another in *L. P.*'s List: and comes next in order of time, to *Steno*. 'Twas in the year 1670, that he set forth, at *Naples*, his *Lettera circa i corpi Marini petrificati, &c. Quarto*. Our Remarker avers that this *Italian* hath asserted the *Reality of these Bodies*: That they were brought in by the *Deluge*: That the *Earth* was then dissolved, and mixed with the *Waters*, and that it at length subsiding according to the *Laws of Specifick Gravity*, formed the *Strata of Stone, Sand, Clay, &c.* †
 Addit, Remarks. and all this *many years* before ever *Dr. W.* wrote one word; so that he is to be look'd upon only as a *Copier after Scilla*.
 or

For my part, I cannot, I confess, see how he could *Copy* it out of *Scilla*: If he copy'd it all out of *Steno*, which I am sure *L. P.* charges him with: as well as with copying it out of *Columna*, *Boccone* and others. Tho *L. P.* being a Person of deep *Reach*, and very *strange Capacity*, can doubtless easily conceive this, and a great deal more. 'Tis indeed very true, that *Scilla* hath endeavoured to prove that the *Shells* he found about *Messina* in *Sicily*, where he lived, and those sent him from the *Island of Malta*, were real: He hath made a very careful *Collation* of several of the *Fossil Bodies* with the *Marine*, and given *Icons* of many of them, which are indeed very *curious*. And as *Scilla* has asserted the *reality* of the *Shells*, and other like *Bodies*, found about *Messina*, and in *Malta*: So likewise hath *Dr. W.* of those which he found in *England*, and which were sent him from *foreign Parts*: Of these he hath vast multitudes by him: And consequently had no manner of need to have recourse to the *Writings* of *Scilla*, or any others, to satisfy him that they were real: But to the *Things* in his *Cabinet*, to *observation*, and the *Evidence of his Senses*. The Doctor's
 design

Design indeed is, by Assistance of Travellers, and Persons residing abroad, to prove that the *Fossil-Shells* dug up in all Parts of the World, as well as those of England, were *Exuvia* of once living Creatures. And here Scilla affords him his Testimony for those of Messina and Malta: As other Persons do theirs, as he will shew in due time, for other Countries. So that we see this Remarker, and his Agents, are so far from Succeeding in their Attempts of depreciating the Dr's. Authority, or Diminishing the Honour of his Design; that they have inadvertently furnish'd the World with a Confirmation of both. But after all, I must tell these Industrious Spitefull Gentlemen, That Dr. W's Arguments for the Reality of these Bodies are very different from Scilla's; and several of them are levelled against the Opinions of Dr. Lister and others, who wrote long since Scilla, to prove that those things were not real, but *Stones sui generis, &c.* In short some of Scilla's Arguments are the same with Colmuna's and Steno's, which have been considered already: Others of them are not valid or conclusive at all. For Instance he Argues, that the *Glossopetrae* are not Minerals, because they lie

lie in no Order or Regularity, but in various Postures: and because they are frequently found broken; For all this is true likewise of the *Belemnites* and other natural Minerals; and therefore this Argument will not hold. Again, Scilla urges that the *Glossopetrae* are not Minerals or natural Chrystallizations, because then they would consist of similar and homogeneous Particles, as a *Grenate* (saith he) or a *Topaz*, is a *Grenate* or a *Topaz* in every part. But this is so far from Truth, that perhaps they consist of greater variety of Particles than the *Glossopetrae* do: so that this Argument of their reality is invalid. He urges also that these Shells were coverings of Animals, because many of them are found bruised and compress'd. But neither is this at all conclusive; for the *Belemnites*, and other Minerals, are often found compressed and bruised as well as the Shells; and of such Dr. Woodward hath several in his Collection. There was one difficulty Scilla met with, viz. that there have been Shells found in the Heart, in the *Renes Succenturiati*, and in the Bladder. Which put him very much to his shifts, and he comes but poorly off; nor indeed is that any wonder, since he went about to solve what there is no ground

vid. Libr.
p. 68.

Q

to

to believe ever *really* happened. But this curious person, is not the *Only* Man in the world whose *easiness* and *credulity* hath put him on a *solution* of that which in all likelihood was intended only to banter and abuse him. There are a sort of waggish people in the world, that take pleasure in imposing upon *studious Men*; and I heartily wish there were not Instances of this in *Print*, and that *so many* too that I think it but very reasonable to put in a *Caution* about the matter.

But let us return and see what Account *Scilla* gives of the conveyance of these Bodies to Land, and whether herein *Dr. Woodward* hath borrowed from him. The *Dr's* opinion is (we know) that they *were left at the universal Deluge*: And this the Author of these Remarks would fain make the world believe was *Scilla's* too, and that *Dr. Woodward* had his Notion from him. But as to *Scilla* himself, he is so very far from ascribing them to the Deluge, that he is not at all *sollicitous* how they came there. He, being a *Painter*, was much pleased with the *Beauty* of several of these *Bodies* which he had found, and accordingly he *designed and*
drew

drew them. He took these things to be really what they appeared to be; but some who saw them doubting of it, occasioned his writing *This Tract*; the design of which he saith *over and over*, was *only to assert their Reality*, nor cared he at all to concern himself any farther. For any *Theory* or *Hypothesis* to account for the *Circumstances* of them, he utterly disavows it again and again: he denies ^{P. 23, 129} that he *knows any thing of the Philosophy of* ^{154, 157,} *these matters*, or that he *cares to know it*; ^{etc.} contenting himself only, he says, with knowing that *the Fossil-Corals are real Corals, the Fossil-shells real Shells, and the Fossil-Teeth real Teeth*, without troubling his Head with the Enquiry how they came to Land. No, he confines his Thoughts to the Objects of his senses, the Bodies themselves; making frequently very merry with those *subtil Philosophers and men of Speculation*, who *finely reason themselves out of their Senses*: And into a Belief that these are Stones, against the very evidence of their Eyes. Hence 'twas that he entitled his Book *La vana Speculazione disingannata del Senso*. He will not allow any Man to be of *sound judgment*, that will not own the things to be what they *appear*: Nay, he cites *Columna*, saying, *he cannot think any*
Q 2 one

one so Stupid or Blockish as not immediately and at first view to affirm they are real. But *how or when* they were brought to Land, he saith, he *neither knows nor cares.* 'Tis true, asserting, as he does, their Reality, he denies that they were products of the Earth, ascribing them to the Water altogether: and in the former Part of his Book he is inclinable to believe that they were the Products of Lakes either fresh

P. 17. 32. *or Salt: or of Rivers, or of Subterraneous Water; but if any of them belonged to the Sea, they might be brought thence by sudden Inundations (not transmitted to us, and obscure, we having*

† Possano esser trasportate dal mare con subite inondazioni (a noi non tramandate, ed obscure) ed ivi lasciate.

no Account of them) *and there left behind.* These Inundations that were so obscure, and their Histories not transmitted

to us, could not surely be the Universal Deluge, and 'tis plain the Author never dreamed of it. But whatever he fancies of their being the Products of Lakes, &c. here, he afterwards recanted that Conjecture, when he found several Bodies that certainly were Marine. And in regard those had all once belonged to the Sea, he asserts they came thence, but *when or how*, he neither

ther knew nor cared, that being, he says, nothing to his Purpose, which was to assert their Reality *. He only contends that the Fossil-shells, Mud, &c. is foreign matter, and brought thither; but at what time

God knows †. And elsewhere *, I know not, says he, whether this hap-

ned in the Universal Deluge, or in some other particular Inundations; adding a little after, that

he is little concerned about these matters, looking only to the Reality of the Fossil Bodies. And

p. 138. He imagines these thing brought † by most terrible Inundations, and such they certainly were, because there remained no living Witness that could transmit in writing the Re-

lation of the precise time when so great a Calamity hapened in the World. Much more might be produced out of him, but I presume by this time the Reader cannot but be satisfied how far Scilla was from thinking these Marine Bodies were brought by the Deluge: or indeed from troubling his

* Robba forestiera ammassata così nel tempo, che sa Iddio, p. 125.

* Non so, se ciò accadde nell'universale Diluvio, o in altre speciali Inondazioni, p. 129.

† Per Ondeggiamenti terribilissimi, è tali al sicuro, che di ragione non restò testimonio vivo, che avesse potuto tramandare in iscritto la relazione dell'ora precisa, nella quale accade nel mondo una tanta disgrazia.

Head with the Enquiry by *what means* they really were brought; or any thing else farther than that they were *Marine Bodies*, and brought to Land by *some means or other*. So far was Scilla from having decided this matter: As indeed were the rest in L. P's List; or any other that I can meet with, before Dr. Woodward. Nor is it any wonder that he is envied the *Reputation* of having first cleared up what hath so much perplexed and so long divided the *Naturalists* of the *Age*.

Well, but let us enquire what reason L. P. had to ascribe the Notion of the *Subsidence* of the *Terrestrial Matter*, of the *Shells*, *Teeth*, &c. according to the *order* of *Specifick Gravity*, at the *Deluge*, to Scilla: and to charge Dr. W. with *copying* it from him. We have seen already that Scilla was so far from thinking the *Shells*, &c. brought by the *General Deluge*, that he declares he knew not *how* or *when* they were brought, but inclines to believe they were brought by *particular Inundations*. The Observations he had made were very few: and those confin'd to a very narrow compass of Ground, which was chiefly the Fields about *Messina*. It seems there the *Shells* usually

usually lay *many of a sort* together. This he took notice of, and imagin'd that in any great retreat or Collection of *Water* *, wherein there was a great number and variety of *Bodies*, those of the same sort would, because of their agreement in *Figure*, be jostled and put together by the motion of the *Water*. But this he owns was a *slight and sudden Conjecture* of his, and desires *not to be charged with the difficulties of it* †. And † *Ibid.* indeed 'tis what has no manner of Foundation: nor will *Bodies* in such a Condition be disposed by their *Figure* to any such *sortment*. The true reason of this *Phænomenon*, 'tis plain Scilla was ignorant of. But further, it seems that in some *Hills near Messina* there are several *Strata*, lying each upon other; the lower part of each whereof consists of *Gravel*, the midst of *midling Sand*, and the upper part of *very small Sand* *. These Scilla taking notice of, he imagined they were compiled by certain *mighty Torrents* †, or Land Floods, which rapidly hurried such *Terrestrial matter* as they met with along with them, till at length the rapidity of their Course lessening by degrees, they let the *said matter* fall to the Ground †, but the

* In un' gran ridotto d' Acque p. 89.

* P. 125.

† P. 126, 127.

† Suolo.

largest Bodies in it first, then the lesser, and lastly the smallest of all: That the Rains, which were the Cause of those Land-Floods, desisting, and then showing down again by turns, for several times successively, occasioned several successive Floods, and these compiled so many several Strata, one over another. Presently after this, because of the Shells and other Marine Bodies found in these Strata, he ascribes their Formation to an Inundation of the Sea. But this carelessness and inconsistency with himself, as well as with Nature, is what so frequently occurs in his Book, that I shall not insist upon it, but take his Notions as I find them, and make the best of them. Pursuant to this Conjecture of the grossest Bodies sinking first, and Consequently Lodging lowest or deepest, &c. he says, that in the Island of Malta, which lies low, there are found buried large Glossopetrae or Sharks Teeth very plentifully, whereas in the Mountains of Messina, which are higher, they find only a few small ones, or only the cortices of great ones, together with Echini, and other Shells which are all lighter than those large Glossopetrae. Malta he thinks rais'd out of Shells*

* vid. p.
88. 90. 91.
133.

Shells, Mud and other Immundities of the Sea: In which manner he thinks an hundred other such Islands may be raised. These are Scilla's Notions: p. 87. &c. And these are all (for L. P. cites none) in him that could possibly give any Countenance to L. P.'s Assertion that Scilla represented the Bodies as subsiding according to their different relative or specifick Gravities. But that he really intended only Bulk or simple Gravity and no such thing as specifick Gravity, may be Demonstrated from these very Passages. There's no one but must needs see that tho' indeed small Glossopetrae are not so heavy, i. e. do not weigh so much, as the large ones do: or the Cortices or Pieces of Glossopetrae, as the whole ones; yet both the small and the larger ones, the Pieces and the whole ones, were all of the same specifick Gravity. Whence 'tis palpable that Scilla has regard only to Bulk, or simple weight. And indeed the Glossopetrae or Sharks Teeth, which he calls heavy Bodies*, and Bodies of greater weight, ^{† Corpi pesanti p. 90.} he elsewhere expressly calls large or great Teeth*; using there the Epithet great ^{† Corpi di maggior peso. ib.} for what he in other places calls heavy, ^{* Denti grossi. p. 133.} and small for what he elsewhere terms light. Then for the Shells of the Echini*

chini, they do not indeed weigh so much, nor are they so *Crafs* and *Bulky*, as many of the *Glossopetra* are. Dr. W. has, amongst lesser ones of almost all Sizes, a *Glossopetra* from *Malta* so large that it weighs 2975 Grains, which is above six Ounces, and that is much more than the Shell of any *Echinus* he ever weighed; nor is it to be doubted but there are found still larger in that Island. But tho' these *Glossopetra* be more gross and ponderous, and weigh more than the Shells of the *Echini* do; yet those Shells are specifically heavier than the *Glossopetra*, they being, to Water, some of them as 2, others as $2\frac{1}{3}$, $2\frac{1}{4}$, $2\frac{1}{8}$, nay some as $2\frac{1}{2}$ to 1: Whereas the *Sharks Teeth* or *Glossopetra*, that are free from Mineral Accretions, are but as $1\frac{1}{4}$ to 1. which is we see Considerably less than the specific Gravity of the Shells of the *Echini*. So that had *Scilla* intended specific Gravity his instance of the *Glossopetra* lying deeper than the *Echini*, would have been apparently repugnant to his intention, they being of less specific Gravity, than the *Echini* are: But it must be own'd that those large *Glossopetra* are of greater simple Gravity and Bulk than the *Echini*, and Consequently if the greater or most ponderous sunk

to

to the bottom first, then the *Glossopetra* must lie deepest in the Earth, which is what *Scilla* contends for. His last instance is of the *Strata* abovementioned. And here he calls the *Gravel* or gross Sand, which lay in the lowest part of the Stratum, the heaviest: The middling Sand, which lay next above the *Gravel*, he says was less heavy: And the smallest Sand, which lay at the top, he calls the lightest of all. Now 'tis true, *Gravel* (which consists of *Pebbles*, *Flints*, &c.) is more gross, and Consequently of greater simple Gravity than *Middling Sand*: As that is more gross and ponderous than *small Sand*; but yet both *Gravel*, *middling*, and *small Sand*, are all exactly of the same specific Gravity. And indeed the said Sand both *middling* and *small*, is no other than very small *Pebbles* *. From * *vid.* Dr. W's Nat. Hist. Earth p. 138.

the whole 'tis so very plain and clear that *Scilla* intends Bulk all along, and simple Gravity, that there can be no dispute of it; and therefore (since the Thing is too foul for me to delineate in its proper Colours) I leave to the World to judge what manner of men they are who positively assert that *Scilla* was of Opinion that the subsidence was according to specific Gravity, (when he hath

hath neither that *Expression*, nor *the Thing* design'd by it, once in all his Book) and this with *Design* to persuade us that Dr. *W.* hath Copied the Notion from him. But after all, if *Scilla* had really intended *specifick Gravity* here, it had been nothing to the *Purpose*. For he is only speaking of the *Settlement* of a little *Mud, Sand, Shells*, born by *Land-Floods* or *Inundations* from one Part of the Earth, and devolved upon another: Whereas Dr. *W.*'s *subsidence* is of the whole *Terrestrial matter* of the Globe, *dissolved* and *sustained* in the *Water* of the *Deluge*. Dr. *W.* fixes the *Date* of this *subsidence*: *Scilla* acknowledges himself unable to do it. Dr. *W.* shews the *Strata* were all formed *at one time*: *Scilla* fancies them formed at *several times*. In a Word, Dr. *W.* hath offered sufficient *Proof* of what he Asserts: *Scilla* nothing like it; so very far from it, that his Notion of the *largest* or *most ponderous Bodies* settling *lowest*, is so gross a *mistake*, that 'tis strange he could ever fall into it. Hardly any *Mine, Pit, or Quarry*, but exhibits these *Bodies, greater and less, heavier and lighter, lying promiscuously and together*, nay oftentimes the *less* under-

underneath the *greater*; they being re-
posited, as Dr. *W.* first observed, according to the order of their *specifick Gravity* as far as could be expected in *so great a Confusion, &c.* But 'twas *Scilla's* want of *Observation* that lead him into this Error. Tho' indeed, without *that*, a little *Consideration* alone might have rectified it. For it is plain the *Sands, Particles* of *Mud, Marl, &c.* amongst which the *Shells* and *Teeth* were lodged, must needs be *vastly less* than those *Shells* and *Teeth* were. So that *Bodies* of quite *different Weight* and *Bulk* must needs settle down at the *same time*, and be lodged together. Nay even *Scilla's* own *Draughts* of the *Things* he had by him, and discourses of, afford us ocular Demonstration of his over-sight and inadvertency; several of them exhibiting *Glossopetrae, Shells, &c.* of very *different Bulk* lying *all together* in the *same Terrestrial Mass*. So that what he here offers falls to the Ground, as destitute of all manner of Support; — So unlike it is to what Dr. *W.* delivers. And after all, 'tis not in the least probable that the *Echini* found on the strand of *Malta*, on which *Scilla* insists *so much*, were any other than what were *originally*

Nat. Hist.
Earth, P.
75, &c.

† vid. Dr.
W's. Nat.
Hist. Earth.
p. 219. &
Seqq. &
p. 222,
223.

originally lodged in the Neighbouring *Cliffs*, and in tract of time beaten forth and wash'd thence by the *Sea*; in like manner as is observable of *these*, and other *like* Bodies in almost all shores of the known World*. So that *those* were not in the *Place* where-
in they *Originally* were *reposit*ed, and Consequently *Scilla* could not make any Judgment *from them* which lay deeper, and which *shallower* in the *Earth*. Nor could they make any thing at all to the *Purpose* for which *Scilla* intended them. Nor is there any manner of reason to Question but there are (were due *search* made) *Glossopetra* on the Strand of *Malta*, as well as *Echini*, and various sorts of both *bivalve* and *turbinated Shells*, beaten out of the *Cliffs*, as is usual on the Shores of other *Countries*. So that take the *Thing* which way we will, *Scilla's Argument* comes to nothing. Nor will any one wonder at *this*, that shall see the *Author himself*, so frequently as he does, profess he little troubled his Head with the *Philosophy* of these matters, or any thing else, but to convince his Antagonists that the Bodies were *Shells* and not *Stones*. From what hath been already said, even on this *other Head*,
fo

so fully appears the false-hood of *L. P.* in Asserting that *Scilla* maintained the Opinion that the *Earth, Minerals, &c.* were *dissolved* at the *Deluge*, that nothing further need be added; *Scilla* never dreaming of any thing more than a meer bearing away of *Mud, Sand, and other loose matter*, and this by *Land-floods, &c.* and not the *Deluge*. Nay he says expressly, that the *Mountains remain'd* standing *after* the *Deluge* just as before, which I presume could not well be had they been totally *dissolved* and *destroyed* at the *Deluge*. For speaking of the tops of the *Mountains* which appear'd the first day of the *Month* above the *Water*, he thinks the *Olive-Tree* (whence the *Dove* took the *Branch* she brought to the *Ark*) grew on those *Mountains*, which, says he, continued *Mountains* as well afterwards, as they were before; his words are, *Monti, che co sì* Pag. 99.
bene restarono dopo Monti, come prima erano.

I proceed to the other *Authors* in *L. P.'s Catalogue*: And now I shall have the less occasion to be *Prolix*, in regard *these* have little more on the Subject than what we find in *Those* already Recited. Next to *Scilla* in Succession of Time comes *Paul Boccone*,
a

a Gentleman of the same Country. The Edition of his *Recherches & observations Naturelles* was in the year 1674 at Amsterdam in 8vo. These observations are chiefly about Plants, Corals, and other like Natural Productions. But amongst the rest there are 3 or 4 Letters relating to the *Glossopetra*, *Echini*, and some other Marine Bodies, found about *Messina*, and in the Island of *Malta*. And these are they L. P. keeps such a Coil about in the *Miscellany Letters*, P. 55. N. 23. in his *Essays*; and these *Additional Remarks*. Signior *Boscone* believes some of those Bodies to be the real *Exuviae* of Animals, but offers not one Argument for it that had not been used before by *Columna*, *Steno*, or *Scilla*; which have been already considered in their proper place. Others of them he thinks not real, but meer *Natural Fossils*, and formed in the Earth by *juxtaposition* as he speaks. Particularly those which he calls *Pierres cendrees*; which yet are apparently *Shells*, and found very commonly in many Parts of *England*. These *Shells*, and the *Lapis Judaicus*, which is the Spike of the *Echinus Ovarius*, he ranges with *Stones*, and *Natural Fossils*, such as the *Belemnite*, *Chrystal*, &c. He

P. 305.
Pag. 305.
308.

not

not at all doubting but that as Nature produces those Bodies tho' of 'a Particular and Regular Figure, so she may in like manner produce Stones in the shape of Shells; and in this Case (saith he) I shall call these Bodies, Stones of a Natural Figure produced by *Juxtaposition* in the Earth. As to the manner how P. 309. those which he allows to be Marine Bodies were brought to Land; They are, saith he, the Effects of *Inundations* and *Tempests* which happened in the Sea: And this appears to me a sufficient Answer to the Question how Marine things were brought into the middle of the Rocks, or to places very remote from the Sea. P. 318. I don't know how sufficient this solution of the thing might appear to *Boscone*; but I'm sure it will never be so to any one that hath ever studiously considered the *Circumstances* of these Bodies. To such a Person I think nothing but what Dr. W. hath advanced can be satisfactory, and that is as different from what *Boscone* offers as can well be, tho L. P. be pleased to pronounce the Dr. only a Copier after him and others. As much does the Dr. differ from him about the *Origin* of Islands, which *Boscone* saith were raised some by *Earthquakes*, and others

Nat. Hist. Earth, Part I.
R heaped

P. 317. heaped up out of the Mud born down by Rivers, particularly the Danube, the Nile, Tanais, Borysthenes, and others. The Reader by this time may easily see what a slender Account Boccone hath given of these things: and that, tho L. P. cry him up as One of the most diligent and nice in these Enquiries, yet he left the matter much as he found it: and Dr. W's. undertaking was as needful as if Boccone had never written one word.

Miscel. Let.
P. 54.

Dr. *Jacobus Grandius* is the next Author in Course of Time; he published his Letter to *Johannes Quirinus de Veritate Diluvii Universalis, & Testaceorum quæ procul à mari reperiuntur Generatione*, at Venice in Quarto, A. D. 1676. This is another of the Pieces that L. P. insinuates Dr. Woodward hath Copyed from. But truly 'tis very strange that he should; for there is hardly any thing in that Book but what is copyed from others, and the Author shews his Learning and Reading much more than his Experience and Observation about these things. He never pretends, nor indeed doth it appear by what he writes, that he had personally made any considerable enquiries into the Earth, Mines, Hills

OR

or Quarries; all which Dr. Woodward hath done with great diligence and Application. So that he had little need to borrow an Account of things of this nature from any one: and much less from one so defective and unable to furnish him with any thing to the Purpose. As to these Fossil-shells, this Author thinks some of them Real, and others meer Stones; but offers no other Argument for the Reality of any of them than what Steno had done before him. And for the Origin of those he thinks Shells, one while he will have them formed in the Places where they are found: For saith he, As to what relates to the Consideration of these Testaceous Bodies, 'tis not less probable, that they (having obtained a proper supply from that genital virtue, which is as old as the World, and which I take to be the common principle of all things) might be formed in the Bowels of the Mountains, than that they were brought thither at the time of the Deluge, or that being generated then, they should endure down to these times*. But in another place he denies that they

* Ad Testaceorum quod attinet considerationem, non minus probabile est ea ex virtute genitali mundo coævâ, quam ego pro communi principio rerum omnium statuo, idoneum fomitem nacta, fortassis intra viscera montium oriri potuisse, quàm illuc Diluvii tempore delata, vel genita, ad hæc usque tempora duravisse, p. 59.

R 2

can

can possibly be generated in the Mountains, or on dry Land, and therefore will have these Shells or at least their Seeds, brought thither by Inundations, or by Subterraneous passages of the Sea. Nay so very Oscitant and uncertain is he, and inconsistent with himself, that but in the very next Page after, he fancies them a Proof of the Truth of the Deluge, because in regard they could not be generated there where they are found, they must be brought thither by water; and no other waters he thinks could come there but those of the Deluge: which is all he offers, and is only begging the question without any Proof at all. To make short of the Matter, his Arguments of the Truth of the Deluge are founded on Tradition, on the Authority of Antient Medals, and of Writers both Jews, Gentiles and Christians, rather than on any Natural Observations, except only one or two taken from Steno. As to his Notions that Noah and Ogyges were the same Persons *: That the Face of the Antediluvian Earth was much different from that of the present ||: That the Air or Atmosphere was originally produced out of Water, and might be reduced to Water again,

gain, so as to cover the whole Globe, and make an Universal Deluge *: That * P. 29. there is an annual Growth of the Body of the Earth †: That Sicily, Cyprus, † P. 53. the Negroponte, and other Islands were torn off from the Neighbour Continents by the Violence of the Sea *: That * P. 59. Pebbles are only fragments of the Stone of Rocks broken off by Water, &c. For these Notions, I say, they are as unlike to what Dr. W. hath delivered, as they are to Nature and Matter of Fact. And to these may properly enough be added his Disquisition whether Stones are generated in the Earth by the same means that they are in the Bodies of Animals: or whether it be a Juice, or Spirit, or Subtile Air, which penetrating Bodies hardens them into Stones †.

† Hence he finds out the reason why these are so frequent in Rivers; certainly the substance of Pebbles is as much different from that of Rock-stone as well can be, besides that they are very commonly now found actually enclosed in the Stone of Rocks.

Pass we next to Dr. Bernardino Ramazzini's Tract of the Springs of Modena, published at Modena in Quarto, A.D. 1692, and lately translated into English by Dr. Robert St. Clair (1697). Which Translation I shall make use of, not being able to procure the Original. In these Additional Remarks L. P. pronounces

nounces this *an Accurate Discourse concerning the Subterraneous Waters, the several Layers or Beds of Earth upon deep diggings, the Fossil-shells, Bones, Vegetables, Pavements, &c. as also upon Inundations and Deluges, with their Effects*: Adding, that he thought fit there to acknowledge the many Obligations we have to that inquisitive Physician for his various observations on the changes of the Earth about the Territory of Modena. Nay, he avers that little hath been added to the Discoveries of Ramazzini, Columna, Steno, &c. by Dr. Woodward, but that he hath made bold to Borrow the best part of his Observations from Them. p. 8. Now I suppose Dr. Woodward will be no more offended at this, than Ramazzini would be pleased with the Complement here passed on him, did he know the Character of this Writer: For any Man of sense would rather chuse to lie under the ill word, than to have the Encomiums of a Person of so very little Judgment and Sincerity. However, let us a little examine into this Charge; Ramazzini was a Physician at Modena, and took occasion to write of the state of the Wells of that Place. He gives an Account of what usually occurs in sinking these Wells, with his thoughts

thoughts whence their water is supplied: Likewise, of the Nature of this Water, its goodness and excellency; intermixing several Hydrostatical Propositions amongst the Rest. Indeed he brings in his Hydrostaticks pretty often, and they make up a great part of his Book. I am not much concerned to look into them, they being foreign to my Design: Tho I confess I was not a little surprized to find many things in them that I did, after so many Books had been wrote, and so well too, on that Subject. This I am sure, as much as L. P. crys him up, his Translator, in Reference to his Hydrostaticks, says, *That he is like one Groping in the* P. 44. *Dark for the Truth, and yet when he hath got it between his hands he lets it slip.* But 'tis besides my purpose to take much notice of these things, only I must say, that his Doctrine of *Antiperistasis* †, and some others that occur in him, are evidences that he hath not tasted very deep of the Modern discoveries in Philosophy. And to come a little nearer to our Subject; it doth not appear that he hath made any great Progress in the *Natural History of Fossils*: for in all Probability, those which he calls *Pebbles adorned with veins of Gold*, were p. 8.

† vid. p.
155, 163.
196.

nothing else but meer *Marcasites*; but what he means there by *Rudiments of Pebbles*, I confess I am not able to divine. Nor do I doubt but those he
P. 27, 28. calls *Coals, and pieces of Iron*, which he saith were found in sinking these *Wells*, were any other than *Pyritæ*: there being often found *Pyritæ* in several Countries, that very nearly resemble *Burnt Coals, and Pieces of Rusty Iron*. But we need not much wonder at these Things, for he tells us expressly, *that in such abstruse matters, to reason with the Philosophers, or to conjecture with the Poets is the same thing*; which he says too whilst he is treating professedly about the Origine of these Springs. After which no one will, I presume, be surprized at the Passage wherewith he concludes his Book, viz. *If I have said something like probable 'tis well: but if not, then both for the Dignity and the Difficulty of the matter, Volutatum est dolium in cranio*. This I am sure, that his Account of the order of the *Strata*, and the *Trees* and other things found in sinking those *Wells*, is not only very odd, but much different from the Account of *Jac. Grandius*; who yet was a Native of *Modena*, and therefore could not want Opportunity of Information of the State of
of

De verit.
Diluvii.
p. 48. &c.

of those *Springs*, and the Things observed in digging them. As much do they differ in their Accounts of the *Course of the Water*, and in their Conjectures about the formation of the *Strata* observable in sinking the *Wells*. 'Tis methinks somewhat strange that *Dr. W.* should borrow from both these *Authors*, and yet they differ so much each from the other in these very Points. But to give him his due, *L. P.* has as odd Fancies with him as one would wish. Now after all *L. P.*'s Proclamations that *Ramazzani's* is such an *Accurate Discourse of the Strata, Fossil-Shells, Deluges and their Effects, &c.* we have only from him a *Narrative*, in three or four Leaves of the things observable in sinking *Wells* about *Modena*: but not a word of any other part of the *World*. As for the *Fossil-shells*, what he hath about them is very short; p. 26. speaking of a Bed of Clay, he saith *that sometimes 'tis found full of Cockle Shells*: And a little after he mentions another Bed full of *Sea Products*: And in another Place, he speaks of *Oyster-shells*: So that this *Accurate Account* consists of about two or three lines. Then as to the *Deluge and its Effects*
P. 109.

Effects : he saith, that all the vast plain about Modena was once a Sea, but in the Deluge the Mountains being pared off and Bared, This Sea was filled with Sand, and so became a Valley; and afterwards, in process of time by continual descent of waters from the Appennine and the Alps, and other Particular Deluges, this Ground did grow up by degrees, and by many Lays or Beds to the height we do now see it of. p. 104, 105. And again, in another place, this growing up of the Ground (saith he) hath not happened but after great Land Floods, they leaving a great deal of Mud here. And before this, The growing up of the ground was but slowly made — and ought to be thought rather the Product of so many Ages, than the tumultuary and confused work of the common Deluge. Then at pag. 164, and 165, he is angry with one of his Countrymen for thinking these Beds of Clay, the Product of the Universal Deluge, being persuaded that they were produced by three particular Floods, yet great and most Antient, so that from one Flood to another much time interceded, &c. Thus he fancies the Beds of the Valleys formed: But from whence the Diversity of those found in Mountains proceeds, he is much at a loss, and comes

P. 147.

P. 116.

P. 167.

comes but slightly off. Nor need that be any wonder since his *Land-floods*, and his other means, tend all to the *Dissipation* of the Beds of the Mountains, rather than to the *Accumulation* of them. In a word, 'tis plain that the *Strata* which are found in all parts of the Earth, in Hills, in Valleys, and Plains; of Marble, of Stone, and other solid matter, as well as of Sand, Clay, Marl, &c. could never possibly be formed by the way he proposes. But indeed the Observations he had made were so few and scanty, that 'tis no wonder he stumbled on such Conjectures. Thus you see how *Accurate* a Discourse Ramazzini gives us of the Deluge! He only just mentions it, and that too to persuade us, that it was no ways concerned in the matter, but that the *Strata* were composed by particular floods, and at distant Times. So that this may as well be called an *Accurate Account* of Tartary, or Lapland, nay of the *Bernacle* or *Diable de Mer*, of *Keppernuts*, *Pignuts*, and *Gernuts*, or any thing else that had come into L.P.'s Head, as of the *Universal Deluge*: and tho' it is said so freely, That Dr. W. hath borrowed the best part of what he hath advanced from this Gentleman, yet

P. 104 &
Seqq.Nat. Hist.
Earth,
Part I.P. 121,
&c.Nat. Hist.
Earth. p.
120, 121.

yet 'tis most apparent the Dr.'s Notions are as different from *his*, as can possibly be. As much do they differ in other matters; *Ramazzini* supposes several *whole Countries*, and some of them vast ones too *gained from the Sea*: Dr. *W.* asserts that there's no reasonable Foundation for any such belief; shewing withal what gave it footing at first in the World. To be as brief as may be, and come nearer to *Ramazzini's* subject, *viz.* the *springs of Modena*; these he fancies supplied by I know not what imaginary *Cisterns in the Roots of the Appennine Mountains*, and that many others owe their Original to *Rains and melted Snow*. Whereas Dr. *W.* hath laid down enough to satisfy any judicious man that *springs do not derive their Waters from Rains, or from any such Cistern, but from that great Subterranean Magazine, the Abyss.*

Mr. *John Ray* is another, and indeed the only remaining person in *L. P.'s* List. For the respect I have for this worthy Gentleman, I shall not enter into too narrow an inquiry into the charge; but am pretty confident that Mr. *Ray* himself, or any sober Man that shall read his, and Dr. *W.'s* writings, cannot entertain the least suspicion

cion that the Dr. could take any thing from him. Indeed they differ so much, in almost every Head, that they could not well differ more. Which no man need think strange, that knows that Mr. *Ray's* Work is *Collected* chiefly out of *other Writers*: Whereas Dr. *W.* hath sufficiently noted the *Failures* of those who had wrote before, and therefore he builds solely upon *Observations of matter of Fact*. Mr. *Ray* is himself I dare say very far from charging Dr. *W.* with *Plagiarism*. Had he had any cause to do so, he had a fair and indeed an almost unavoidable Opportunity of doing it when he publish'd his *doubts* in Opposition to Dr. *W.'s* asserting of the *Reality of the Fossil-Plants* †. Tho' I cannot pass by this occasion of acquainting this worthy Gentleman that they who engaged him in the Publication of those Doubts were not over friendly to him: and I believe any man who shall well consider them will be soon of my Opinion. The Things whereon those exceptions are founded, are — 1. That *there must be many kinds of the Antediluvian Plants quite destroyed and lost*: 2. That *there are found no Flowers, Fruits, Roots, or other Parts of these Plants, besides leaves*: 3. That

† *vid J. Raii Synopsis Stirpium Britannic. 1696 in Præfat.*

3. That *these leaves* are found *smooth and extended, without folds, convolutions or wrinkles.* 4. That the *Stalks of Plants, and the Parts that are near the Roots, being very strong, 'tis not likely that the Roots could have been broken off in the Water; and yet there are neither Roots nor Pieces of Roots ever found.* These are the *Positions* whereon Mr. Ray builds what he there offers. But they have no Warrant from *Nature*; the *Things* being indeed quite otherwise than he represents them. For 1. It does not appear, nor does he offer any the least *Proof*, that any one single *Species* of *Plants* hath been lost since the *Creation*; tho' the *Fossil ones* be admitted to be *real.* 2. There are *Roots* and other *Parts* of these *Plants* found besides their *Leaves*: And this in very many parts of *England*, as well as beyond *Seas*, and in great *Plenty* too. 3. The *Fossil-Leaves* are found with *Folds, Convolutions, and Wrinkles*, yea in all the *Disorder* and *Confusion* that may be, and this very frequently; tho' some of them indeed are found *smooth and extended.* 4. 'Tis very easie to conceive how the *Roots* of *Plants* might be *broken off* in the great *hurry* and strange *Emotions* that were at the
Di-

Deluge,† and yet both *Roots* and *Pieces* † *vid. Nar. Hist. Earth Part II.* of *Roots* are at this *Day* very commonly found. Here is therefore plain *Matter of Fact* against all Mr. Ray's *Positions.* But if there had not, and we should suppose the *Things* were as he sets forth, yet would it not thence follow by any means that these *Bodies* are *not real*, or any thing like it. For 1. Admit that *several kinds of the Antediluvian Plants* were quite lost, would it thence follow that the *Plants* that were preserved in stone, &c. are *no Plants*? 2. Suppose likewise that there were *no Flowers, Fruits, Roots, or other parts of the Plants found, besides their Leaves*, must we needs conclude therefore that those *Leaves* are *no Leaves*? † 3. Let † *vid. Pag. 114, 115. & 116. supra.* it be granted that the *Leaves* are *always found smooth and extended*, is a *Leaf* not real because 'tis *smooth and extended*? 4. Tho' it were *unlikely that the Roots of these Plants could have been broken off in the Water*, yet if these *Leaves* are found *apart*, 'tis plain the *Roots, &c.* were actually *so broken off*, by some means or other, tho' we could not easily conceive how that might happen; at least we are not thence straightways to infer that the *Leaves* that are so found apart, are *no Leaves.* So that

that I think Mr. Ray might very well have spared these *Exceptions*. And of this I am ready to give him still further evi^{ti}on if ever he shall please to call for it : As also to shew that he is much out in asserting, as there he does, that *Nisan* was, not the initial Month of the Year amongst the Hebrews before their Descent into Egypt : And that the most Learned Interpreters of Holy Writ the place beginning of the Deluge in the Month of November. In this he is so much in the wrong that I engage to produce double the number of Learned Men for the Spring (which is what Dr. W. asserts from both Nature, and the Holy Oracles) that Mr. Ray shall for November, let him demand a Poll as soon as he pleases ; for 'tis Foreign to my present purpose.

And thus, Sir, have I gone through the whole Charge which you are made to bring in these Remarks against Dr. Woodward : And carefully considered Columna, Steno, and all the other Authors in this List, without any Affectation or Prejudice to either side. I can very truly say that I have Stated the matter fairly and equitably between them, and Dr. Woodward. and that I have

have not in the least mis-represented any Thing one way or other. I have weigh'd every individual Article of this charge, and perused those Authors with the strictest Attention : Nor have I stifled or conceal'd any thing in Favour of the Person I have attempted to vindicate ; whose Book I have a value for, only as I think it conformable to Truth and to the Phenomena of nature. From what hath been produced out of their own Writings, it is, I think, very apparent how far Dr. W. is from having taken any thing from those Authors. Nay, so very tender and equitable hath he been, and so far from giving any the least occasion to the Accusation L. P. hath here brought, that because Steno, and the rest, have but treated on some of the Subjects that he does, the Dr. fairly and openly quotes them. Nor had L. P. any manner of Grounds to charge him with taking any thing from those Writers, but that he found the Words, Deluge, Shells, &c. that Dr. W. hath since used, in them ; tho for the Things, and the Philosophy of them, he is so contrary and differing from them, and this with good reason too, that what he hath produced is as really new as i

S would

Nat. Hist.
Earth p.
39. Conf.
p. 4, 5, 64,
65. *supra*.

would have been had *those Authors* never wrote ; so that *L. P.* might e'en with full as much reason have charged him with taking what he hath set forth from *Ovids Metamorphosis*, or *Mr. Hobbs's Leviathan*, as from *Steno* or the *other Authors* he mentions.

Nor indeed is this only *my own Judgment*, but what very many others, and some very Learned Men, have subscribed to. For it must be allowed that unless *Steno*, and the rest, had proved the Fossil-Shells *real*, all that they offer about the *Deluge*, or any other means of bringing them out of the Sea to dry Land, is of no regard. Most certainly it ought first to be proved that the *Shells* were *real*, and generated at *Sea*, before the *Enquiry* how they were removed from the Sea takes place; because if they be not real Shells, then they never belonged to the Sea. Now, that *Columna*, *Dr. Hook*, *Steno*, *Scilla*, *Boccone*, &c. had not evinced that they were *real Shells*, we have the unanimous and concurrent Opinion of *Dr. Lister*, *Dr. Plot*, *Reiskius*, and several other Learned Men, who have wrote since *Steno* and *those other Authors*, professedly to prove, that they were *not real*, but *meer Stones*, and
formed

formed where they are now found. These Gentlemen must needs give their Testimony for *Dr. W.* because if *Steno* and the rest had indeed proved the Shells were *real*, then they ought not, after that, to have openly asserted the quite contrary : But if they had *not proved* it, 'tis very plain that *Dr. W's* Undertaking was but what was necessary. And I cannot but advertise *those Gentlemen* that *L. P's* Charge must needs affect them at least as much as *Dr. W.* † Nay, *Dr. Lister* levels what he offers against *Steno* directly and by name. After he has premised that the Person he writes to, at least he is confident, will not believe him one of a litigious nature, Adding withal, that his differing from *Steno* proceeds not from a Spirit of contradiction † ; he asserts against him, that there is
no such Matter as Petrifying of Shells in the business, but that these Cockle-like Stones ever were, as they are at present, Lapides sui generis, and never any part of an Animal. It is most certain, for so he goes on, that our English Quarry-shells (to continue that abusive Name) have no parts of a different Texture from the Rock or Quarry they are taken, that is, there is no such thing as Shell in these

† Philoſ.
transact.
N. 75.
Conf. Lib.
Cochli-
tarum An-
gliz. 40.

† This was
Anno
1671.

resemblances of Shells, but that Iron-stone-Cockles are all Iron-Stone, &c. and that they never were any Part of an Animal. And presently after he concludes them *Lapides sui generis*, and that they were not cast in any Animal mold, whose species or race is yet to be found in being at this Day. We see here this Gentleman was far from being convinced or satisfied by the Arguments of *Steno*: so far that he runs directly counter to him. We see he is very positive and certain these are no Shells, that they never were any part of an Animal, which he repeats again and again, no, nor so much as cast in any Animal mold, with what follows, which I confess I cannot well understand. However, this is exceeding plain, that he thought the Shells no Shells. Nay, he'll not allow them to be called so much as Quarry-shells, being it seems in much displeasure even with that Name, and pronouncing it positively an abusive Name; averring, that they have no parts of different Texture from the Rock or Quarry they are taken. Tho, I must confess, I cannot imagine how he distinguish'd those Shells from the Rock if they differ'd not from the Rock, and the Iron-Stone Cockles were all Iron-stone.

Surely

Surely this worthy Gentleman either wrote this in very great haste: or the Rocks and Iron-stone he searcht had no Shells in them; or some other Matter there was in the Business, that tho' I have puzzled my Head very much, I declare I cannot possibly find it out. The truth is, 'twas a little hard in our Author to infer against *Steno* that there were no Sea-Shells in the Quarries of *T. scany*, because he could find none in those of *Yorkshire*: and he may almost as well infer, there are no Olive or Orange-Trees growing in the Fields of *Italy*, because he had met with none *juxta Nunnington, Bugthorp, Hinderkelf, or Huntly Nab.* But however, Shells he will not have them to be, but *Imagines, Umbrae, Figurae, & Resemblances of Shells*, tho only Stones all the while, meer Stones, *Lapides, Lapides sui generis*, over and over, & *Lapides terrigeni*; assuring us withall that * he is not rash in doing this, and asserting that the Nature of the Earth produces them there †, where they are now found. Nay, speaking of a Body, which he calls a Stone, giving it the Title of *Conchites rugosus, &c.* he assures us, that Stone is only a meer Figure, shaped by the Power inherent in the

* Non temere id facio.
† terra natura ibidem gignat.

Pura putata figura est, a vi Lapidis insita effigata.

Stone, or in it self. But which is still more *surprizing*, he will needs have some of these Bodies formed by *halfs* and by *piece-meal* : and because he found several that were not *intire*, tho he denies not but some of them might have been *broken*, yet others he thinks were *concreted Naturally in halfs or in*

some still lesser part of them *. Just as if a Cow shou'd bring forth a Calf with only a Tail, but neither Head, Feet, nor any other part of the Body ; which Simile I use, that the Reader may the better apprehend this *Learned writer*, and imagine what it is he drives at. Nay, he says, *there are found about in the Rocks as it were the Rudiments of these Stones, i.e. the first Stamina, or Shootings, or I know not what else to call them, from which they gradually grow up to a perfect State ; and if this be so, I think Steno may even go whistle with his Sea-shells.* 'Tis in pursuit of the same Argument that Dr. Lister ranks these Bodies with *Crystals*, and with the *Belemnite*, which are indubitably *Stones*, and of *meer Mineral substance*, pronouncing the *Belemnite* a sort of *Stones* that are turned or *whirl'd without any whirl* †. He calls the very *Quarries* wherein they are found

* Ex di-
midia aut
minore sui
parte eri-
am natura-
liter con-
cretose esse.

† Lapidibus sine ul-
la voluta-
turbinatis.

found *Cockle-Quarries*, the Bodies themselves *Cockle-Stones*, *Cochlita*, *Conchita*, and I know not how many more. Nay, even *Pectinita*, *Petunculita*, and *Buccinita*, which must needs be very strange things indeed. To be as short as may be, he asserts, that *all manner of Cochlita* (under which general name he comprehends all these Fossil Bodies) are *concreted out of pure and meer Stoney matter* : the *Crusty* or *Shelly* part of them, consisting, he says, of *Selenitis*, *Sparr*, or *Pyrites*. Nay so far bent was he upon this *Opinion*, that when he met with as *plain-Shells* as plain could well be, he chose to renounce his Eyes rather than the *Opinion*. Thus in that *Tit. 32.* which appears both by his *Draught* and *Description* of it to be incontestably a *Sea-Shell* (tho possibly it might have a little Spar insituated into the Pores of it) yet will he have it to be nothing else but a *meer Stone*. It being of the *bivalve kind*, he found of the same sort sometimes which both *valves* together, sometimes dis-joined and apart, and therefore inferrs, that *these were naturally concreted apart, and those together*. He acknowledges, that they had all the *Parts* and the *Characters* of true

Universos
Cochlitas
ex purâ
& merâ
Lapideâ
materiâ
concretos
esse.

Shells. They had the *valves*, the *cardines*, the *apophyses*, yea, the very *vestigia* where the *Tendon* that connected the *Fish* to the *Shell* was inserted. In short, he owns, they not only were like the *Shells of Animals both on the inside and outside*, but that there was nothing wanting in them that is ever observed in the *Shells of living Shell-Fishes*. All which one would have thought would have been enough to have satisfied any Man that it was a *Shell* indeed: But notwithstanding all this, he sticks to his Opinion, and will have it to be only a meer *Stone*. Nay, instead of allowing it to be what it really was, a *Shell*, he falls to admiring the extreme *Artifice of Nature*, for thus forming of a *Stone* so like a *Shell*, that an *Egg* could not be more like an *Egg* than that was to a *Shell*, and yet 'twas only a *Stone* after all. More Instances of like kind occur in this Author: and amongst the rest a very Remarkable one, *Tit. 43.* this being apparently nothing in the World but a pretty large *Oyster-Shell*. As to the *Arguments* for his Opinion, one is, that *Quarries of different Stone yield us quite different sorts of Shells*. To which I shall not rejoin what *Dr. Woodward's Observations* and his *Cabinet*, or indeed what

what almost every *Rock* or *Quarry* shews; viz. That there are different kinds of *Shells* found in the same sort of *Stone*, and the same kinds in different *Stone*; but only remind him of what he himself lays down elsewhere, i.e. † That ^{† De Cochlit. p. 231.} he found the very same kind of *Conchites* in a sort of *Stone* very like *Coal*, that he did elsewhere in *Iron-stone*; which, how he will be able to reconcile with what is delivered above, I must confess I cannot see. Another kind of *Conchites* he mentions Page 233, some whereof contained in them *hardened Clay*, others *Lime-Stone*, and others *Iron-Ore*, which one would think were *Minerals* different enough in all reason. Another kind, P. 240. whereof some contained *Flinty Matter*, others *Iron-Ore*, others *Crystal*. Nay, he mentions a kind of *Pectunculites*, as he calls it, whereof he frequently found some in *Gravel-Pits*, others in *Lead-Stone*, and others in the *Alum-Rocks*; now unless *Gravel*, *Lead-Stone*, and the *Alum-Rock* are all the same, which 'tis plain they are not, but as different as well can be, and yet yield, as he himself says, the same kind of *Pectunculites*, I cannot possibly imagine how he could ever fall into the Position, that different

Stone

Stone yields quite different sorts of Shells: And thence inferr, that those Shells were no Shells. For the rest of his Reasons, tho' they be indeed very short, yet to lay them down here would not be much to the Purpose; it appearing sufficiently from what hath been already said how far this Gentleman was from being convinced by the Arguments of Columna, Steno, Boccione, Scilla, &c. that these are real Shells, and owing to the Sea.

The Industrious and very Learned Naturalist Dr. Plot was as far from being convinced by them as Dr. Lister was; he very strenuously and copiously in both his *Nat. Hist. of Oxfordshire* and that of *Staffordshire*, maintaining, that these were *Natives of the Earth, meer Stones, and not Shells, in opposition to Dr. Hook, Steno, and Boccione.* The same hath been maintained likewise by Dr. Hatly, Mr. Beaumont, Mr. Misson, and in short the *Generality of Writers* on this Subject here. Even Mr. Lhwyd, (a Gentleman of great Learning, and great Curiosity in these Things,) who wrote the latest of any on the Subject, (his *Letter about form'd Stones, &c.* † and *Notes relating to the Fossil-Plants* †, being

† Philos.
Trans.
N^o. 200.

† Additions to
Camden, in
Elinish.

ing set forth but a very short time before Dr. W.'s *Work* appeared) notwithstanding what Columna, Steno, Scilla, and the rest had done, acknowledges, that † *his Observations were not then so far advanced as to determine whether these Bodies were real or not* (tho he

† Nondum satis maturas esse nostras observationes, ut id decernam. — nos crassa ignorantia laborantes. — p. 749.

says above he *vehemently suspects* † they † P. 753. were): And that he was much in the Dark as to this affair. Nor, admitting them to have belonged to the Sea, could he possibly ever find out how they could be conveyed thence into Mid-land Countries, and into the innermost Bowels of Rocks and Stones; † and there-† P. 749. fore refers his Reader for farther light and instruction in these Matters to Dr. W's *Work* * then shortly to be published; nor has the Dr. fail'd his Expectations. As much in the dark this worthy Gentleman owns himself to have been as to the *Origin of the Fossil Plants* †. He calls them only *Delineations, Resemblances, Mock-Plants, Mineral Leaves*, which, saies he, are not only produced in the Coal-Slates, but sometimes in other Fossils. And, continues he, whoever would prove these *Subterraneous Leaves an Effect of the Universal Deluge*

* Ibid.
p. 753.

† Additions to
Camden. p.
692. &c.
Seq.

Deluge, will meet with the same difficulties (not to mention others) as occur to those who assign that Origin to the Fossil-Shells. Being thus embarrass'd himself with the enquiry, he breaks off, and remits his

* P. 693. Reader here likewise to Dr. W's Work * then in the Press.

Nor are the *English* the only Persons that were dissatisfied in this Point: And so far from being convinced of the *Reality* of these Bodies by the Writings of *Steno*, &c. No, *Learned Men abroad* were as little convinced as the *English*. *M. Joh. Reiskius*, in his *Comment. de Glossopetris Luneburg.* 8°. *Norimb.* 1687, asserts, in professed Opposition to *Columna* and *Steno*, that the *Glossopetra*, and particularly those found in *Malta*, of which *Columna* and *Steno* treat, are not *Teeth of Fishes*, as they pretended, but *Stones*, and *natural Fossils formed in the Bowels of the Earth*. He weighs *Columna's Arguments* * very particularly, and one by one, but *rejects them as not at all conclusive*, and falling far short of proving the *reality* of those Bodies. As particularly takes he *Steno's Arguments* † to task, and *refutes* them severally also, and one by one. He pronounces them

vil. P. 1,
20, 27, 35,
& 65.

* P. 58.
& Scqq.

† P. 67 &
S. 99.

them over and over *meer Conjectures* † † *Argumentati-unculae conjecturales* p. 65. *Conjecturales Rari-unculae* p. 67. *Conjectura dubia* p. 65. *Guessees*, and bare *Hypotheses*, falling to the *Ground of Course*, as repugnant to *Experience* and *Observation*: and *rejects his Conclusions*, as of *no weight at all*. In like manner the Famous *Jesuit P. Buonani*, in his *Observationi delle Chiocciole* 4°. in *Roma* 1681, oppugns the opinions of both *Columna* and *Steno* no professedly. He denies that the *Fossil-shells* are *real* †, that they ever belonged to the *Sea*, or were brought in by the *Deluge*: And asserts that they are *Stones*, *Lapides sui generis*, *formed in Mountains*, and *generated in the Bowels of the Earth*. Of which opinion likewise is *Dr. Frid. Lachmund* in his *Descriptio Fossilium Hildeshemensium* 4°. *Hildesh.* 1669: As also *Joh. Quirinus* in his Letter *De Testaceis Fossilibus Musaei Septalliani*, 4°. *Venetiis* 1676: *Dr. J. Dan. Geierus* in his *Sched. de Montibus Conchiferis*, 4°. *Franc.* 1687: and several other *Learned Men*, whom I need not recite here. From all which it clearly appears that *Columna*, *Steno*, *Boccone*, *Scilla*, and the rest, were so far from having evinced the *reality* of these Bodies, that the quite *contrary Opinion*

† P. 1.
Cap. 7.

† It is not yet agreed among the Learned, whether these Bodies formerly called Petrified Shells, but now a days passing by the name of formed Stones, be original Productions of nature formed in imitation of the Shells of Fishes; or the real Shells themselves. Mr. Ray's 3 Discourses 80. Lond. 1693. pag. 127.

Opinion universally prevailed, both here and beyond Seas, † and they past for *Stones*, till Dr. W. cleared the thing, and put it out of Doubt; and this partly by offering more plain and convincing Arguments than were before offered: and

partly by refuting the Reasons that Dr. Lister and others had urged since Steno and the rest wrote. So that now the Opinion of their *reality as universally obtains*, and with much more Reason and Truth. I know no body at this time a Day that withstands it but L. P. and he hath the luck to be only *laught at* for his pains by all Men of *Ingenuity and Understanding*. Upon the whole, 'tis, we see, very manifest how false and groundless L. P's charge is in *all the Parts* of it, and how far Dr. W. hath been from taking any thing from *those Authors*; and whether we look into the *Authors themselves*, or take the Judgment of *other Learned men* concerning Steno, and the rest, 'tis apparent how far they fell short of satisfying the World of the *Reality* of these *Bodies*.

F I N I S.

