

**A supplement [to 'An essay on electricity'] : containing remarks on a rhapsody of adventures of a modern knight-errant in philosophy [i.e. John Freke] / By Benj. Martin.**

### **Contributors**

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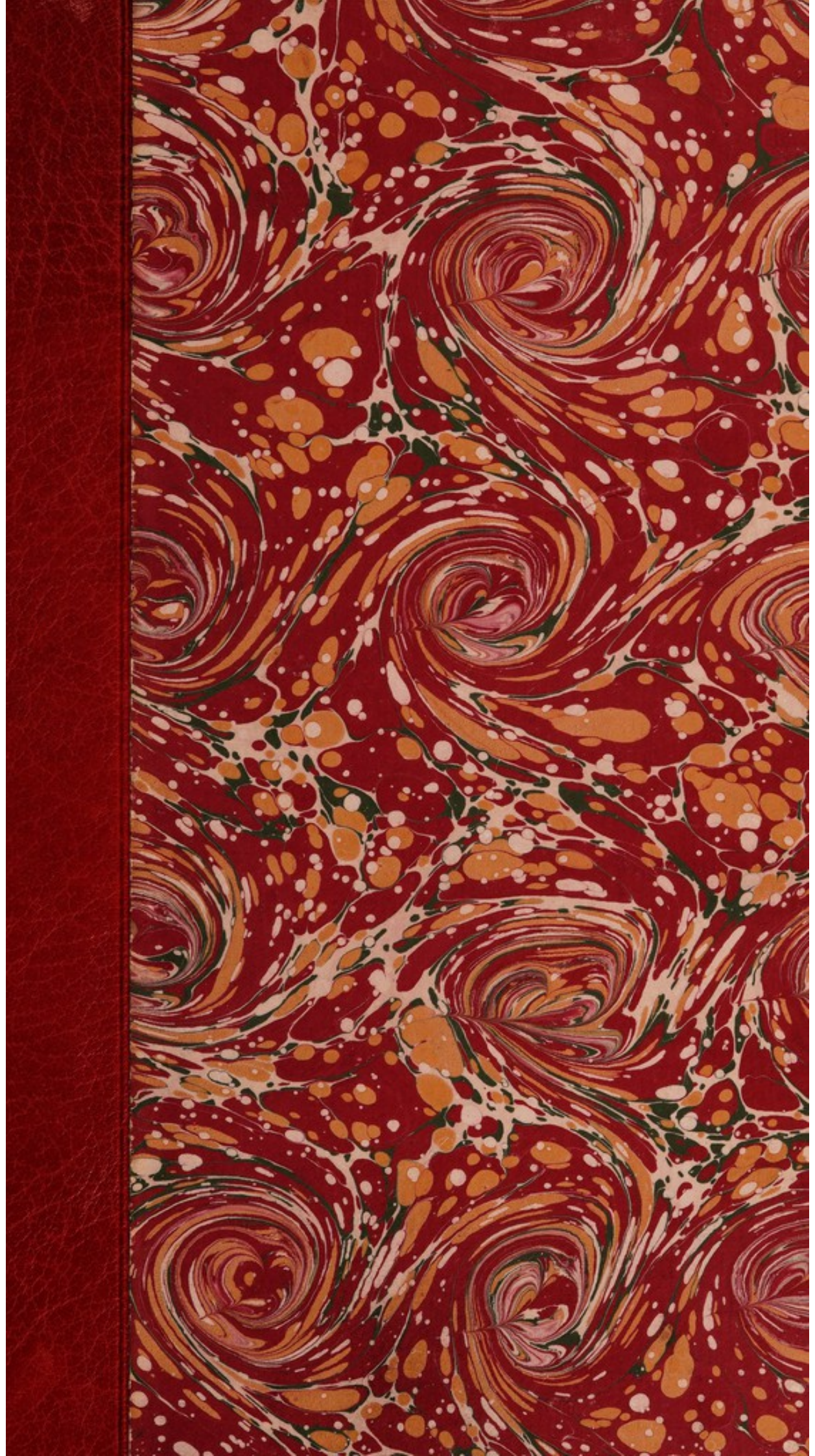
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SUPPLEMENT:  
CONTAINING  
REMARKS  
ON A  
RHAPSODY  
OF  
ADVENTURES  
OF A  
Modern KNIGHT-ERRANT  
IN  
PHILOSOPHY.

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By BENJ. MARTIN.

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ענה כסיל באולתי. PROV. 26.5.

*Nemo me impune laceffet.*

*When thou mockest, shall no Man make thee ashamed?*

JOB. xi. 3.

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B A T H,

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SUPPLEMENT  
CONTAINING  
REMARKS  
ON THE  
CHAPTERS  
OF  
ADVANTAGES  
OF A  
Moral Economy  
IN  
PHILOSOPHY.

BY BARRY MARTIN.

Printed by J. G. & J. H. B. at the  
University Press, Oxford.  
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## E R R A T A.

<i>Page</i>	<i>4</i>	<i>Line</i>	<i>1</i>	<i>for from r. for.</i>
	<i>5</i>		<i>9</i>	<i>r. to make appear.</i>
	<i>12</i>		<i>9</i>	<i>for those r. these.</i>
			<i>22</i>	<i>for dazled r. dazzled.</i>
			<i>ib.</i>	<i>for mislead r. misled.</i>
	<i>17</i>		<i>15</i>	<i>for Corput r. Caput.</i>
	<i>18</i>		<i>20</i>	<i>for Simu r. Simi.</i>
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	<i>31</i>		<i>2</i>	<i>r. I said.</i>
	<i>33</i>		<i>18</i>	<i>for those r. these.</i>

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# REMARKS

O N A

## Rhapsody of Adventures, &c.



IN the *Preface* to my *Essay* on *ELECTRICITY*, I have taken Notice of one Mr. *F—ke*, whose Displeasure and Chagrine thereat he has been pleased to let me know, (in the two last Pages of his *Appendix*) in a very extraordinary Manner. What I there said, I look upon myself in common Justice bound to make appear to the World to be true, in Regard both of the Author and his Book. The Whole of what I said amounts to no more than this, viz. *That his Book contain'd such Conjectures, and wild Reveries, as excited my Pity and great Concern at reading them: And, that it seem'd to me, that the Author understood not the Elements of modern Philosophy, and had opposed or forsaken Sir Isaac Newton, in accounting for Electricity.*

B

I AM



I AM now to excuse Myself <sup>for</sup> ~~from~~ dealing so freely with this Gentleman, and his singular Performance. As to the first Part, I imagine any Man will easily conceive, that from the very Constitution of human Nature, Pity towards any unfortunate or miserable Object will naturally arise; this is acknowledged even by Mr. F——ke himself, who declares he should have the same Compassion for me, if he thought Poverty was the Cause of my thus treating him. Now, if a *pecuniary Poverty* can excite this Passion in Mr. F——ke towards an Adversary, surely much more ought a Man to be affected thereby, and to express it in the strongest Terms, towards one who appear'd to me under the most moving Circumstances of a *mental Poverty*, or deplorable Deprivation of Intellects. As this was the Case, I think Mr. F——ke can never be so ungenerous and perverse, as to include my Compassion for him, in what he calls *unmannerly Abuse*.

THEREFORE it must be what I have said of him, and his Book, by which he thinks himself abused. Nor can my calling his Notions of the Cause of Electricity, by the Name of *Conjectures*, be any Affront, since he has had the great Modesty to usher them into the World under the same Appellation, with his own Pen. Conjectures are free, and every Man has a Right to propose them; but then they must be qualified to appear in the World, and



and not affront the common Sense of Mankind.

BUT to come to Point, what sticks in the Craw of this Gentleman, and proves so hard of Digestion, is my calling them by the scurvy Name of *Reveries*, and saying, that he *seems not to understand the Elements of Philosophy, and is an Apostate in Newtonianism*. But this I expect will prove an easy Task; and I shall attempt something more, *viz.* to prove that Mr. F—— *ke* not only *seems to be*, but *really is*, what we properly call a pure *Ignoramus* in the first Principles of Philosophy, or in other Words, a *Philosophaster*; and that he has all the natural Concomitants thereof, *viz.* Presumption, Pride, Arrogance, Stupidity, and Scurrility, in a most remarkable Degree. These Things I shall make appear in a Set of Remarks on his Pamphlet and Appendix, which I think would never have been worth any Man's while to undertake, had not the Author in his Preface told us, *That a Gentleman of superlative Understanding had express'd a Desire of his printing it*; and the Forwardness of many to judge and determine in Matters of which they understand little or nothing, to the *Prejudice of Truth and True Philosophy*; and by which the most scandalous *Smatterer in Physics* stands as good a Chance for a Reputation among *the great and small Vulgar*, as the most despicable Coward does for Honour, by *Powder and Ball* only.



To begin therefore with the Title Page, I have made great Enquiry among Gentlemen of Learning and Penetration, what could be the Reason of prefixing this Motto, *Naturam expellas Furca, &c.* to a Treatise on Electricity; but no one could unfold it; no one could see the Propriety, or what Relation it had to either his own, or any Man's Notion of Electricity; and all allow'd it might stand before any other Book whatsoever, with as good a Grace, as before this: And I should have thought the proposing any Thing, without any Appearance of Reason, a glaring Mark of Stupidity; had I not remembred, that a great Scholar once asserted, *That any Man may account for Lightning, who understands Greek*; if so, then surely *Electricity may be accounted for, by understanding a little Latin*; and so I unriddled the Mystery of the Motto, without more ado.

LET us next examine the Tenor of his Dedication to Mr. PRESIDENT FOLKES; his first Address is a positive Assertion, that all who are acquainted with Mr. FOLKES *must* approve of his Choice, in dedicating his Book to him: But pray, why must they do this? Suppose, for Argument, the Book was not worth any Gentleman's Notice, why must they approve of a Dedication to Mr. FOLKES? On the other Hand; suppose it a valuable Performance, Why should they then be obliged to approve of such a Dedication? Is Mr. FOLKES oblig'd to patronize;



patronize ; and must his Name give Sanction to Sense or Nonsense, only because an Author shall have the Assurance to presume on a Dedication, without giving any Reason for it ? He further says, *If there be any Merit in the Piece, Mr. FOLKES's Name will add a Lustre to it.* I grant it ; but if I shew there is no Merit in it, pray what a Figure will a Name of so much Honour make before it then ? Would not this be making a *Pasquin* of a PRESIDENT, in some Degree ? A Man that had not the utmost Goodness, as well as Greatness of Mind, would be apt to put such a Construction upon the present Case.

As to the Preface, it is such a *Farrago* of vain Pretences to Authorship, Self-Opinionatedness, Diffidence, Fear, Desire, Hope, Comparisons, and God knows what to call it besides, as I believe never before appear'd in the *English* Tongue. Here you have a perfect Specimen, or Portrait, of a poor Creature labouring for Fame, under all the Malignity of a *Caecoethes Scribendi*. At last, after several convulsive Throws, our *Virgin Author* is deliver'd ; and lo !—

*Nascitur ridiculus Mus.*

BUT this *Mus* is not only ridiculous in the Manner of its Birth, but seems to have been first begotten by *Falshood* : For we are told by its teeming Parent, *That Nobody here or abroad*  
had



*had published any Thing touching the Cause of Electricity.* What superlative Ignorance must this Assertion argue, in a Person just setting out upon Adventures of *Knight-Errantry*, for Fame! Sir *Isaac* long ago, Dr. *Dessaguliers*, and others, at Home; *Professor S'Gravesande*, *Muschenbroeck*, *L'abbe Nollet*, &c. Abroad, have all wrote particularly on this Subject. But why do I mention Authors, who, I dare say, are as heartily despised by this Man, as the *mercenary Tribe of Experimenters* are in his *Appendix*; Authors that he has never read, nor ever will be able to read. For nothing, I believe, would be easier to make appear, than that any common Writers in the *Theory of Philosophy*, (not to mention the *Principia*) are equally as unknown and unintelligible to him, as the Rabbinical Commentaries of *Aben Ezra*, *Solomon Iarchi*, &c. But an Author he must needs be, at any Rate.

————— *urged on in spight*  
*Of Nature and his Stars to write.*

THIS great Undertaker first undertakes to endeavour to prove, that Electricity proceeds from no Part of the *Apparatus*: And how does he do this? Why truly by an Argument strictly mathematical, *viz.* If from *Five* you take *Three*, there will remain *Two*. (*This No-body can deny.*)——But says he, the Glass Ball always remains the same as at first, *Ergo*  
 it



it cannot proceed from it. [We must take Care of this acute Reasoner, else we shall be *ergo'd* out of our Senses, in Regard to the *Virtue of the Loadstone*.\*]

NEITHER does it *proceed from the Leather*, says he ; Why does it not ? Why because it does not proceed from the Globe ; for we have no other Reason offer'd.——But suppose, after he has ascertain'd the *Laws of Electricity* for us, we should play him off one of those 1000 *Tricks like Legerdemain* † ; and it should be discover'd after all, that this Electricity is nothing more than a little *Phosphorus* sewed within the Cushion, which the Globe squeezes out by constant Friction : This, I think, is much more probably the Case, than any Thing this ‡ *Fellow* has advanced. It is the Conjecture of a good honest *Weaver*, who is as suspicious of being imposed on by a Pack of *conjuring Knaves*, as ever my Friend *F——ke* can be, and more capable of detecting and exposing them.

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\* The Loadstone constantly emits the *Magnetic Virtue*, and yet is always of the same Fitness for Use. But this is nothing to the Purpose ; for No-body thinks the Electrical Fire is originally from the Glass itself, as this Author would intimate, but is only thrown out by the Vibration of its Parts.

† See his *Appendix*, Page 60.

‡ Note, The Word *Fellow* is here put, by Way of Abbreviation, for *Fellow of the Royal Society*.



His next Argument is, *That if the Electricity be not in the Globe*, it must be from without it; and that *this Notion may not appear trifling*, he appeals to the most able and ancient Philosophers, concerning their Opinion about Animals and Vegetables being animated by Fire, and nourish'd by Water: If he had given us their Notions about the *Hooting of Owls*, and *Croaking of Frogs*, it would have answer'd the End just as well; and his *Pabulum Vitæ*, or *Flama Vitalis*, might have been infer'd with the same Dexterity at Logic.

HE next proceeds to shew how his *Flama*, dispersed in the Air, may be collected, and ground down into *Electricity in Experiments*. I expected long, e'er now, to have seen an Advertisement in the Papers of a new-invented *Electrical Mill*, by this celebrated Artist; for I understand he is an Adept in Mechanics. But at present we are fobb'd off, with the course Experiment of drawing a Rope thro' the Fingers swiftly; by this, says he, you are liable to burn them: Very well; all this is wonderful! What then? *Why then, this Burning probably arises from their grinding in, between their Fingers and the Rope, more Particles of Fire than were naturally together in the Air.* (Better and better still!)

BUT stop a little, and let us breathe upon this Foundation Principle; and if you please to answer



answer the World a few *Queries*, you will, in your great Humility, do——no more than your Duty.

*Query 1.* PRAY where did you get, or how did you come by this *Aerial Fire*, that is thus ground between the Fingers? You no where pretend to prove that it is in the Air; all you say is, that it *seems to be there*, which is no Demonstration at all to a *Leger-demain-Man*; for they, shrewd Rogues, know too well the Difference between Things *seeming to be*, and *being in Reality* what they seem. You therefore are chargeable with a shameful *Petitio Principii*.

*Query 2.* WHAT do you mean by your new Phrase of *grinding in these Particles of Fire*? I suppose, in the Phrase of the *Vulgar*, it must mean no more than a *Gathering in* of those Particles; but as I have not the *Canting Dictionary* by me, I may hope to be excused, if I am mistaken.

*Query 3.* How is a Dullard to understand, that drawing the Rope swiftly, should bring more fiery Particles to be between the Fingers, at the same Time, than drawing it slowly, or not drawing it at all? I'll suppose your Fingers and String immersed in a Pot full of *Mustard*; do you think you could thus grind in a greater Quantity of Mustard  
C between



between the Fingers, than what naturally come together without?

*Query 4.* SUPPOSE the Pores of Glafs are immensely large, in respect of the Particles of this supposed Aerial Fire, (as Sir *Isaac Newton*, and Dr. *Keill*, have proved they are, with Respect to the Particles of Light) then where is the Possibility, or the Probability of those Particles being ground in with the Air, on the Surface of the Globe? If it be said, that these pretended Particles are larger than the Pores of the Globe, then that must be made to appear, or else this *Fundamental Proposition* will only prove fit for a *Patty-Pan* at last.

THO' I am one of those *whose Time is but little worth* \*; yet never have I spent it to so poor a Purpose as I have done, since I have unluckily pretended to characterize and confute this Book: Had I let it alone, it would soon have spent itself, as other *Ignes Fatui* do, after having dazzled the Eyes, and mislead a few heedless People for a small Time; but as it is, I have brought upon Myself the woful Task of disproving and confuting——*just Nothing at all.*

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\* See his *Appendix*, p. 60



I HAVE hitherto consider'd this Renovator as a *Mendicant* only ; *Nunc paulo majora canamus*. I took the Liberty of saying, this Author was one of those *who oppos'd Sir Isaac* ; and to let the World know what Reason I had for that, I shall here set his Words against those of Sir Isaac's, that the *Antithesis* and *Contradiction* may the more easily appear.

SIR *Isaac Newton* expressly says, that *Heat* consists in the *vibrating Motion* of the Parts of Bodies ;—That when Bodies are sufficiently heated, they emit *Light*, and *shine* ;—That when a Body is heated so hot as to emit *Light copiously*, it becomes *Fire* ;—And lastly, That this Vibration of the Parts, which produceth Heat, Light, and Fire, is caused several Ways ; and among the Rest, he says, IT IS MADE BY FRICTION. (*Optics Quer.* 5, 6, 7, 8, 9, 14.)

BUT his Antagonist says, it is UNPHILOSOPHICAL and UNMEANING for any One to advance, that Fire is CAUSED BY FRICTION,\*

I AM now serious, and submit it to all the Judges in Philosophy, whether any Thing has been ever yet publish'd so indignant and reproachful to that Great Man, by any of his



most inveterate and profess'd Enemies? I have read *Gordon*, and others, but never observed in them such a *bare-faced and blasphemous Contradiction*. And this was nearly the whole Reason of my taking any Notice at first of this sorry Pamphlet, and its shameless Author.

THIS Author dares not say, he did not know Sir *Isaac* does every where assert Heat, Light, and Fire, to be caused by Friction, or Agitation of the Parts of Bodies: How then dares he stigmatize such an Assertion, when made by such a Man, with the infamous Epithets of *unmeaning* and *unphilosophical*? I think when my Great Master has been thus boldly represented as an *unphilosophical Idiot*, I have met with great *Lenity* in being reduced only to a *Country Show-Man*; since most *Show-Men* are sharp Fellows; none are without *some Meaning*; and, I believe, the *most illiterate* of them all can explain the *Philosophy* of their *Magic-Lantern*, much better than he has done that of *Electricity*.

THE Idea which the *Newtonians* give of Fire, is that which is derived from its natural Properties and Effects. *viz.* to create *Heat*, to emit *Light*, and to *Burn*. But what the *Elementarians* call Fire, is a something which has neither *Heat*, *Light*, nor *burns*; and therefore is as opposite to Fire, (properly so call'd) as *Darkness* to *Light*. But they say, it becomes Fire,  
by



by being collected together ; suppose that, and then what becomes of the Element ? The saying *Fire is contain'd in a Flint*, is just as good Sense as saying *Colour is contain'd in a Flint*, and just as consistent with Rules of Logic \*.

I REMEMBER one Adventure of *Don Quixote* was to fall foul upon a *Flock of Sheep*, which he took for an Army of Men ; nor could *Sancho* convince him of his Absurdity, 'till he had hack'd and hew'd them to Pieces. Just so our doughty Knight, having heard of a *subtile Matter*, or ethereal Particles in the Atmosphere, resolves at once to seize upon, and make Fire of them ; to collect them, and grind them down into *Electricity*. They must, and shall be Fire.

—*Sic volo, sic fubeo, stat pro Ratione Voluntas.* ‡

THIS is the first great Exploit of our Adventurer ; the Second is to prove the Cohesion (I suppose he means the *attracting Power of*

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\* 'Tis well known to the Learned, that the *Latin Word uro*, to burn, comes from the *Hebrew Root* 𐤅𐤍 *Lux, Light* ; and that in every Language, the Word that is used for *Fire*, is never properly applied to any Thing, but what has the Power of exciting *Heat, or Light, or of burning*.

‡ In *English* :

*I will that they be Fire,  
And Fire they are, I say,  
My Will for Reason stands  
For ever and for aye.*

*Cohesion*)



*Cohesion*) among the Particles of real Fire ; and to prove *Fire is similar to its Parts* ; or in other Words, to prove that *Fire is similar to Fire* ; at these he takes great Pains ; but as no true Philosopher ever yet doubted of either, I shall leave this, and pass on to the next Exploit.

THIS is nothing less than to prove, that what all Philosophers have determined ELECTRIC BODIES, are not so ; and *è contra*. (*This is worthy of himself.*) — But how does he perform it ? Why, first he reduces them all to *Caput Mortuum* ; and being dead, he insists upon it *there is no Fire in them*, (tho' every one knows there is LIGHT and FIRE in many dead Substances) and having no Fire in them, they can attract none ; therefore they are not electrical, and are therefore *Non-electricables*. And how does the Champion prove all this ; by the most subtle Argument imaginable, *viz. They are, in Truth, the Excrements only of Bodies which once had Life*. Thus, *Wax* is the *Excrement* of *Bees*, *Silk* the *Excrement* of *Caterpillars*, and *Rosin* the *Excrement* of a *Tree*. *Probatum est*.

BUT pray, *Sir Knight*, don't bolt out Proofs so fast ; do you think the *Wax* comes out of the *Intestines* of the *Bee* ? Do you understand the Philosophy of *Plaisters* and *Sear-Cloths* no better than this, and yet pretend to account for *Electricity* ? You'll have Subtlety enough by and by to prove, that the *Bricks* and *Mortar*  
of



of a House are nothing but the *Excrements* of the Mason who builds it. \*

———— *Risum teneatis Amici?*

AFTER this, our Knight sets Spurs to his *Rozinantine Muse*, and bounds over many a Hill and Dale, 'till at last he arrives to a Mine, in which there is a *Damp* that puts out a Candle; and he undertakes to account for it. First, says he, here is Room enough for a Candle to burn; (*surely there is*)—Secondly, this Air has been robb'd of its Fire; (*A cunning D—l of*

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\* Our Author says, (*Append. p. 57.*) What I say is, *That whatever had once Fire in it, is capable of being electrified*: And here he says, *Wax* is not capable of being electrified, because an Excrement, or *Corpus Mortuum*; Ergo, *Wax never had Fire in it*. But should our *Monopolizer of Understanding* be told by his 'Prentice, that *Wax* is nothing but the *Farina* in the *Apices* of Flowers, (*See Nat. Hist. of Bees, p. 42.*) and collected and carried thence by the Bees, on their Legs, to make their Combs withal, how much like a *Philosopher* must he look? And what a wonderful *Logician* is this, that after he has proved by a *Syllogism* there never was any Fire in *Wax*, i. e. in the *Farina*, he should assert, (*Page 43*) *That the Farina abounds with more of this Fire than any other Part of the Plant?* This is truly *Philosophy travesty*, and the greatest *Burlesque* upon *Common Sense*. Had the Author none, among his boasted Friends, that had so much Concern for his Character, as to give him a gentle Hint on this Head, to prevent his exposing himself a second Time to the Mercy of *miscreant Critics*. But, the Case was, I suppose, that his Pride would not permit any of them to think for him; and they knew too well the Truth of his Motto, *Naturam expellas Furca, &c.* That is, in *English*:

If *Dullness* you drive out with just *Disdain*,  
She'll, with *Electric Tawag*, return again.



*a Thief, to steal Fire where there was none)*  
 —Thirdly, *Ergo*, no Fire nor Animal can subsist there—Fourthly, I have *heard say*, a factitious Damp has been made in an Air-Pump, and a Mouse was put in,\* and was kill'd; (*How was that done, Sir Knight?*)—Fifthly, by having its *Fire extinguish'd*—by Fire. (*Wonderful well! and worthy a Gentleman of his Order.* \*)

THE next Feat he undertakes, is to account for Electricity setting Fire to inflammable Bodies; and in order to this he thus ratiocinates; Electricity passes from the electrified Body in a converging and diverging State, just as Rays of Light does thro' a Lens; (*This is very good in the Mouth of a Knight-Errant, tho' every Show-Man knows the Contrary by Experiment.* †)

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\* The Experiment here referr'd to, of killing an Animal, is that of *Burnt Air*, as'tis call'd; but one would have thought, that considering our Knight has insisted so much on the *Similarity of Fire to Fire*, and the strong *Cohesion between its Parts*, he would have undertaken to shew, that the Air in passing thro' Fire, would have acquired still more Fire, and have even animated a dead Mouse, rather than killed a living one; for this would have been strictly reasoning *a Priori*; nor durst any of the *low Tribe of Experimenters* have contradicted him by *Matters of Fact*; these he might have rejected, as *posterior Topics*, and utterly unworthy of his Knowledge. Had he done this he had been *similar to himself*.

† This is the first Time, I believe, that any Body ever heard of a Glass *Lens*, which both converged and diverged the Rays of Light. It may be in vain to ask our Knight, if he meant a *Convex*, or a *Concave Lens*, since *I can suppose* he knows nothing of the Nature of either.

Then,



Then,—This Electricity forms a *Capsula* of a LAMBERT FLAME, about *Half an Inch thick*, which encloses the electrized Body, (*for-give him Heavens!*) and pervades also every Part of the said Body, (*Thanks to the Knight for this Discovery; \**) and every Particle of Matter which constitutes that Body. (*Henceforth be silent, ye vain Philosophers, who talk of the Impenetrability of Matter!*)—This converging Fire is farther proved by going off the Ball suspended from the Barrel, in Form of a *Vortex* (*exceedingly good;*) a Spot of blue Flame will appear at each End of a round Ball placed under in a Saucer.—This being all supposed, then a Flame issues out at the End of the electrified Finger or Sword, and it is no Wonder then, if an inflammable Spirit should take Fire from it.

BUT, good Sir Knight, what do you mean by the Flame? Do you mean the diverging Flame of electrical Fire at the End of the Sword? 'Tis reasonable to think you do, because you, who think scorn to do any Thing as the *Vauke* do it, must be allow'd to do it in your own Way, *viz. a Priori*; and then it

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\* For it has been hitherto a great Question with those who shew Experiments for Money, whether the electric Virtue ever goes Skin-deep into any Person or Thing that is electrified.



will be genuine *Quixotism*, and every Way consistent with yourself. \*

HIS next Adventure is to account for light Bodies being attracted and repell'd from the Tube ; and his Argument is very shrew'd : For, says he, if what I have said be true, *how can this Phænomenon be otherwise ?* I fear, Sir Knight, you'll by and by bewray your *Cowardice* ; a *Knight Adventurer* should stick at nothing, but *boldly assert Things are so and so*, and not risk his Glory upon the doubtful Particle *if* ; because if that be denied him, alas for all his Renown from *Feats of Chivalry*.

BUT here begins the lugubrious Part of my Tale, and woful Things now betide the Knight ;

\* It is worth while here to observe our Knight's Criticism on the Shape of a Gun-Barrel, and give it first in his own Words, which I shall call,

*The Knight-Errantry Stile*, (See Page 26.)

“ Its being a Gun-Barrel, can be no *other* Reason for its Preference in that Shape, rather than in another.”

*That is in English without Sense :*

“ Its being a Gun-Barrel, can be no Reason for its Preference in the Shape of a Gun-Barrel, rather than in another.

*That is in English, with a Meaning :*

There is no Reason for the Preference of a Gun-Barrel, to a Piece of Iron in any other Shape.

I confess, I am in this Case greatly beholden to the Knight ; for before this, I thought I had always used the Gun-Barrel for the-Sake of its Form, or Shape only.

for



for being on the Summit of a craggy Mountain, and lost in Cogitation, there happen'd a dreadful Stroke of Thunder, attended with a Thunder-Bolt, that (tho' happily missing the Knight, yet) fell so direfully on the Head of his poor *Musa*, that down she fell, Knight and all; and so great was the Force, that the *Cranium* of the Beast *struck Fire out of the flinty Rock*, and was grievously wounded in that dangerous Part: The Knight lay sprawling for a While, but at last recover'd, and received no Bruise, (for his Helmet was of *impenetrable Brass*;) Upon examining the *Pericranium* of his hapless *Musa*, it appear'd, that there was a Fracture of the Skull, and a Depression of one Part which appear'd to bear too hard upon the *Dura Mater* and *Cerebellum*; the Knight trepan'd her with great Dexterity, and thus secured the *Sensorium Commune*, and the *Glandula Pinealis* pretty well: But one Misfortune does not come alone; poor *Musa* had a violent *Contusion* and *Swelling* upon her Shoulder; this he *lanced* and *probed*, and dressed in the *Farriery* Way, and recover'd her so far, as to be able to pursue his Adventures. But, tho' the Scene was melancholy, it would have made any Cynic smile, to observe how the Knight was convey'd thro' the rest of the Way, by a wabbling *peristaltic Motion* of the poor Animal with its lame Shoulder.



THE Knight having pretty well recover'd his Spirits, rallies all the Powers of his Mind, and forms inviolable Resolutions to go thro' with his Designs. *I will endeavour*, says he;——*I can suppose*;——*I hope to shew*;——and with the great Assistance of *if's* and *and's*, he accounts, in a most wonderful Manner, for all *Electric Arcana*; from the Excrements of Animals, to the *Anima Mundi*, to the great Astonishment of all the *Literati*. Yea, so great is the Courage of our Adventurer on some Occasions, that he scruples not to declare, *That he will venture to account for what has hitherto puzzled every Body*; and in the true Stile of Knight-Errantry, he explains *Generation* in Vegetables, and tells us how a *Mule-Flower* may be begotten between a (*Horse*) *Pink*, and an (*Ass*) *Sweet-William*, by the procreative Power of Electricity. And for this also,

——*Tota cantabitur urbe.* \*

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\* *That is in English :*

With his new Fame each Coffee-House shall ring ;  
And his great Wisdom all the Town shall sing.

Our Knight tells us here, (Page 43) *If you will suppose the Matrix and Farina abounds with more Fire than any other Part of the Plant or Flower*, the Great Wonder is at an End. So it is really ; for now we find our Knight's *Finances* amount at least to 400 *l. per Annum*. For,

What makes all Doctrines plain and clear ?

*About Two Hundred Pounds a Year.*

What makes that true, which just before

Had been prov'd false ? *Two Hundred more.* Hudib.

ONE



ONE Adventure more is all that I can at present stay to relate of our worthy Knight: And it was on this wise:—The Knight, as he was scouring o'er the Sea Coast by Night, saw at a great Distance before him the Sea Water *shine*, which he took for a *Ignis Fatuus*, or *Jack with a Lanthorn*, and was determined to pursue it, that he might be able to account for that also; but unfortunately for him, his Way lay thro' a Marsh, and heedless of the Road, with Eyes intent on this *Deceptio Visûs*, poor *Musa* stray'd, and plunged into a *Bog*; the Knight in great Consternation jump'd off, and with a great deal of Dirt and Turmoil, endeavour'd to lug out the poor Beast, but in vain; so great was the *constrictive Power of Electricity in the Mud*. But luckily a *Sailor* comes by, the Knight begs his Assistance; the *Sailor* pitying his woful Plight, gives him a Hand, and after many a Pull and Haul, out flounced *Musa*, in a ruful Pickle indeed; but what proved the greatest Mortification to the disastrous Knight, was loosing the fine Trappings of the poor Creature, and the *Lion's Skin*, with which had been adorn'd; all which lay mix'd with the Mire of the Bog, and could not be recovered. Our Knight was now reduced to the sad Necessity of riding on a Creature appearing in all the Simplicity of Nature, (except what the Dirt hid) and with a more than common *Length of Ears*. This put him so out of Countenance, that he resolv'd to desist, and  
return



return the shortest Way home. But even still *he will endeavour* to atchive something worthy of Knight-Hood, and therefore undertakes to *account for the natural State of the Air*. And thus he proceeds :—The Ether is *supposed to inhabit* above the Atmosphere ;——the common Air is *supposed* to be within the Atmosphere (*right Sir Knight*) ;——The Feats of the *mighty Weight* of the Air in the Operations of the Syphon, Pump, &c. I confess I could never understand (*who wonders at that.*) \* ——I would account for them, as well as that of the Barometer, by the *Air's Elasticity* ;——I chuse to suppose Air is an Element as well as Fire (*we desire no better Proof;*) ——and that the Difference in Air is only be-

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\* Our Knight's confessing he could not understand the Operation of Syphons and Pumps by the Weight of the Air, was the Occasion of my saying, *He did not understand the Elements of Philosophy*. Sir Isaac Newton, Mr. Cotes, Dr. Hulsbam, Dr. S'Gravesande, Prof. Muschenbroeck, Dr. Desaguliers, &c. &c. &c. have all demonstrated this by every Sort of Argument and Proof, in so plain a Manner, that I'll be bold to say, there is not a Tyro in Philosophy in the three Kingdoms that does not understand it: But what then; must our Knight understand it whether he has Intellects or not? No surely. And if there be any Thing in Philosophy more easy to be understood than these Effects, I shall readily acknowledge Myself guilty of *unmannerly Abuse* to any that shall make it appear. I confess, what he says of the Barometer (Page 50) surpasses all the unintelligible Jargon I ever yet saw, on any Subject whatever: And is this what he is *commanded to write*? what we must *applaud his Dedication of* to the PRESIDENT? *what all sensible Men would be glad to have shewn?* O Tempora! O Mores!



tween *foul Air* and HEAVY, and *clean Air* and LIGHT.

AT this, all who heard him, set up such a Hallabaloo, as had such an Effect on the Muscular System of our Knight, as was like to prove fatal to him, (especially the *Cephalopharyngæi*, and the *Crioarytænoides*) which so affected the *Pharynx* and *Larynx* of the Knight, that what he said afterwards about the Quick-silver rising in the Barometer, was absolutely unintelligible to every Body; as was every Thing else he *endeavoured*, *supposed*, and *hoped* to account for afterwards.

THESE Feats of *Electrical Chivalry*, being published to the World, drew upon the Knight a Variety of Censures: Some said they had a Regard for the good Knight, and was sorry to see he had exposed himself to the Ridicule of Mankind: Others said nothing of it; our Knight supposes, for want of Apprehension, Fear of Conviction, or a worse Cause than either. A third Sort, made several Objections to them, and would have set him right in several Things they conceived he had been mistaken in. But how preposterously officious did these Gentlemen seem to the Knight, and how great was the Affront to his Knight-Hood! *They set me right!* No, marry quoth the Knight, 'tis my *Perogative to set them right*; and I'll do it in the following Manner, &c.

Then



Then follows such a Hoge-poge of his *Crambe recocta*, as would give any Man the *Vertigo* to read it: Nor is there any Thing more than what nicely quadrates with *Knight Errantry*. \*

AFTER this our Knight seems to be in a very morose Mood, and angry with half Mankind; his Fury first falls upon the whole Class of *Experimenters*, who take Money for *shewing their Experiments*. These he reviles in a

\* I shall here just take Notice of two or three Pleas that have been made for this Author, by those who understand as much of the Matter, as he does himself.

If he asserts, say they, the Existence of *Elementary Fire*, he has great Authorities on his Side, as *Boerhave*, &c. — ANSWER. *Boerhave* has nowhere proved any such Thing, nor any of his Followers; One *Sir Isaac Newton* against him, will prove of more Weight than an Hundred *Boerhave's* for him. Had he asserted *Elementary Fire* only, I had taken no Notice of it.

He shews, say they, *That Fire is not caused by Friction, any more than Water is by Pumping*. This is false; he shews no such Thing; and his Simile is perfectly ridiculous. Who does not see, who cannot prove there is Water before the Pumping? But where do you see, where they find Fire before the Friction?

Again, they say, *Both Sides beg the Question*, and he may as well do that as *Sir Isaac Newton*. I deny that, and they know nothing of *Sir Isaac's* Writings who affirm this. *Sir Isaac* was no Mendicant; he proves every Thing he asserts in the plainest Manner; as I shall shortly take an Opportunity to shew.

Lastly, they say, *Sir Isaac was not infallible*, and therefore he may be excused for opposing him. This I again deny; *Sir Isaac* was *infallible* in every Thing that he proved and demonstrated; that is to say, in all his Philosophy; and this I have made appear in the *System of his Philosophy* here advertised, Page 2.

most



most insufferable Degree ; asserting, they are BOUND to try all Means to gain Applause :— That they are capable of playing a thousand Tricks like *Legerdemain* :— That they are a People whose Time is *little Worth* ; with more to the same Purpose.

GOOD, Sir Knight, why all this Ire ? How have those Gentlemen provok'd your Spleen ? Is it their *taking Money* only, as you pretend ? Or is it not rather, that they are a Set of Men the most proper and capable of detecting and exposing your empty and worthless Exploits of Knight Errantry ? \*

BUT who does the Knight mean by *those who shew Experiments for Money* ? Do not the chief *Philosophers* in Christendom do this ? Do not the CHEMISTS, the ANATOMISTS, the PHYSICIANS, and DIVINES every where,

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\* I can't help thinking that some of these *Electrical Impostors* have at last imposed on the credulous Knight. He believes, that this mighty Force of Electricity strikes People with the Palsy, and takes away their Speech. Matters of Faith with him, are as good as Matters of Fact. I expect to hear they'll next make the Knight believe, that Electricity proceeds from nothing but the *Le Diable* in the Gun-Barrel spitting Fire thro' the Pores ; and indeed he seems already to entertain some horrible Notions of it in some of his squeamish Moods. If this should be the Case, he'll fall to atchieving again, and then, Wo be to the poor *Diablo* !



*read Lectures for Money?* Are they for this to be stigmatiz'd with the odious Names of artful *Tricksters*, *Cheats*, and *Legerdemain-Men*? If not, then why are those who give *Lectures* in ELECTRICITY for *Money*? A Person that can thus throw out Invectives upon all Professions of Men, the most eminent in the Land for Learning, ought to be had in *Derision* by every Man, who has any Concern for the Honour of the Common-wealth.

BUT the Dregs of Vengeance the wrathful Knight has reserv'd to wreak upon me; and glad should I have been to have sustain'd the Whole: I am only concern'd to think that any of my Profession suffer'd *his Indignation* and *Calumny*, on my Account. Why could he not have spared the *Innocent*, and pour'd his Fury alone on my devoted Head? He might have made me a *Show-Man*, a *Sot*, a *Debauchee*, or any poor *Devil* he pleased; this would not have given me a Moment's Uneasiness; but to abuse others on my Account, ought never to be forgiven. I desire no higher Honours than what I have always enjoy'd; that is, *to give Lectures in Philosophy with Credit to the Science, in the Esteem of those who are proper Judges.* \* 'Tis true, indeed, I should  
be

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\* The Knight's making me a *Show-Man* is merry enough, and is the only *Spark of Fire* there is in the Book.—I remember, as my Goods were once carrying into my Lecture-Room



be glad to have a little more Money ; yet, Thanks to Heaven and Friends, I have no Necessity so great as to be guilty of any *mean or ungenerous Action* for Money : No Man can accuse me of any such Thing ; or be base enough to insinuate it, but our invidious Knight. Besides, suppose I were ever so poor, is Poverty a Crime ? Is there any Argument in that to prove our Knight is Wise, or that I am not able to shew the Contrary ? If not, what boots his *Ridicule on Poverty* ? But, pray who is this *conceited contemptuous Knight* ? I never heard of any such Person, 'till he harang'd us

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Room, at a certain Town, the Rabble crouded about the Door, to know what it was ; and one wiser than the Rest immediately cries out, *'Tis a ZHOW come to Town* ; and what do we give to 'zee't ? A GUINEA, replies the other. Z——nds, says the Fellow, this is the D——l of a *Zhow* ; Why, *Luck-man-zshure*, none but the *Gentle-Vauke* can zee this. And to say the Truth, there are many Places where I have been, so barbarously ignorant, that they have taken me for a *Magician* ; yea, some have threaten'd my Life, for raising Storms and Hurricanes : Nor could I shew my Face in some Towns, but in Company with the Clergy or Gentry, who were of the Course. And this was the Case of the ingenious and learned Mr. *Domkey*, at *Southampton*, when he was there with his *Show*, as I was inform'd by a Gentleman of that Town. Such likewise was the Case of our celebrated *Show-Man*, Dr. *Deffagulier*, as I have been told. And is it not a deplorable Case, that *Philosophy* should be thus disgraced by *Mackarel-Women*, *Wool-Combers*, and *Knights Errant* !



with his ~~his~~ Adventures ; \* I fancy, by that, he moves in a very narrow Sphere, and has nothing to make him considerable, unless it be his *boasted FINANCES* ? If this Knight would make me contemptible, let him accuse me of *Pride* and *Vain-Glory* ; of publishing *Falshood*, and *villainous Innuendos* ; of palpable *Ignorance*, and the *grossest Nonsense* ; and of being capable of *Defamation beyond all the Powers of Billings-Gate*. Of these Things I should be heartily ashamed. 'Tis true, he says, *I have abused him in an unmannerly Manner, and wrote what no Gentleman would have written*. But why did he not *prove all this* ? I have nothing but his *ipse dixit* against me ; and I hope that will not be thought a Proof in this Case, whatever Argument there may be in it for Electricity. But how have I abused him ? I said, *He did not understand the Cause of Electricity* ; and I appeal to the Judicious, if I have not made that appear. I further said, *He did not better understand the Elements of Philo-*

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\* One would imagine our Knight conceits himself to be the *Third Cato* of *Juvenal*, tumbled out of the Clouds.

*Tertius e Coelo cecidit Cato.*———*Sat. 2.*

For who else would presume to compare themselves with *Harvey* and *Newton* ? Who else would vaunt a CHARACTER that shall call an Answer into the World ?———I believe no one would envy this great Man's *thinking for himself*. But why must he dose other Folks with his Crudities, and cram his *Excrements* down their Throats ?

*Sophy ;*



*sophy*; and had I not his *own Confession* for this? I said, moreover, *He opposed Sir Isaac Newton*; and of this I have given most flagrant Instances. Lastly, I said, *He was guilty of writing Nonsense*; and those who think this *abusing of him*, I beg would undertake to make Sense of several Passages in his Book that I have, \* and others that I can, point out. The Question is then, if I have said any Thing more than the Truth of him; if not, I have not abused him. And is this more than what *any Gentleman may write*? Is it unworthy of a Gentleman to vindicate Truth and Science against those who would obscure and confound it with *Words without Knowledge*? Surely not. I suppose our Knight thinks he has the Privilege of Writing any Thing he pleases, tho' ever so bad: I don't deny that; but then let him have the Courage to be told of it, since the Press is as free for one, as for another. But he complains the Abuse was *unmannerly*: How so, for God's Sake? Did I not give him his Title, F.R.S. and pray what more could I say of him to his Credit? I have no other Notion of Ceremony with an Author than *Plain Dealing*; *Honest Truth* is all a good Writer expects in the Censures of the World; and a bad one ought to think himself well off, if he has that *only*. But

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\* See the Passage of the *Barometer* before quoted.



to gratify the Ambition of this extraordinary Gentleman, I have treated him here with more *Dignity* and *Reverence*, which I hope will excuse my former *Rusticity*. Upon the Whole, I am conscious of having done no more than what the Truth and Reputation of the most excellent of Sciences require, and in which I have the Precedents of Gentlemen of the best Sense in every Age, in their several Professions.



POST-





## POSTSCRIPT.



HAVING now done with the *worst* *Writer* on *Electricity* that ever was, I shall beg Leave to make a few Observations on what we have just now proposed to us from the *best*; I mean the *Sequel* of the ingenious and industrious Mr. *Watson*; a Piece, whose Merit infinitely exceeds its Price, and which will soon be in the Hands of every *Virtuoso*. From a great Number of the most surprizing Experiments relating to this Virtue, many of which are New, he makes several Inferences; and then proposes several *Queries* relating to its Nature and Properties.

CONCERNING these I have the following Things to observe. And First, I think, with Regard to the First *Query*; those Experiments do undeniably prove the Affirmative, viz. *That Electric Attraction and*  
*Repul-*



*Repulsion* are to be attributed to the Flux of *Æther*, or *Æthereal* Particles of Matter: But then why Mr. *W.* gives it the Epithet of *Electrical*, I do not see; since I think Sir *Isaac Newton* has plainly shewn, that this *Æthereal* Matter is the common Subject of all Kinds of Light and Fire, as well as that of Electricity.

THE Second Query is, *Whether the Electrical Æther is any other than Elementary Fire?* I beg Leave here to observe, that I think there is a very material Difference between what is here call'd *Electrical Æther*, and *Electricity*. The Latter is undoubtedly *Fire*; but the Former, I deny to be *Fire*, and much more, that it is *Elementary Fire*. But before this Query can be fully answer'd, I would ask, what we are to understand by *Fire*, and by *Element*, in the Sense these Gentlemen would be understood in?

THE Third Query is branched out into several Particulars, every one of which is immediately proved true by Experiments.

BUT the Fourth, viz. *Whether this Fire* (as it must be call'd) *is not intimately connected with all Bodies, at all Times?* I think is not proved either by Reason or Experiment. To prove this would be to prove this *Æther* an *Element*; but then, how shall we prove the *Element* an *Æther*? for I take it, there is  
a



a great Difference between *Æther* and *Element* in Philosophy. The utmost the Experiments prove, is, that this Electrical Matter is conducted by *Water*, *Flame*, *Smoke*, &c. and not that it has been separated from them as if it was naturally in a State of intimate Contact with them. Fire indeed will attract and cohere with Fire, but I know of no Experiment that proves such an Attraction and Cohesion between the Particles of Fire and Water.

THE *Fifth Query* concerning its *Elasticity* has been always allow'd.

THE *Sixth Query* concerning its *Elasticity* being the Cause of the *Explosions*, *Concussions*, &c. is beyond Dispute right, and is obvious from Experiments. But then this is not peculiar to this Sort of Fire, but common to all when confined; as in kindled Gunpowder, Thunder, Lightning, &c.

IN the *Seventh Query*, I judge the Comparison would be more proper of a *Water Pump*, than an *Air Pump*; for in the latter, the Air is not supplied as fast as it is exhausted, as the Electric Matter, or *Æther*, is in the *Fire-Pump*, and Water in the *Water-Pump*. But this is not to the Purpose.

THE *Eighth Query* is, whether these Experiments do not cause us rather to incline to the

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Opinions



Opinions of *Homberge*, *Lemery*, *S'Gravesande* and *Boerhaave*, who held Fire to be an original distinct Principle, than those of *Bacon*, *Boyle*, and *Newton*, who conceive it to be mechanically producible from other Bodies? I answer, by no Means. There is a Difference between *separating Fire from Bodies*, and a *setting in of Fire*, (i. e. *Æther*) to those Bodies from the Air; which latter is all that is proved by the Experiments. Nor do I think this Fire *was always, 'till now, consider'd as coming from the Glass only*: It has been consider'd as freely pervading the Pores of all Bodies, and thrown out by the Vibration of their Elastic Particles, excited by Friction. The Passage here cited from *Boerhaave*, I fear, will prove a little too much, if it proves any Thing; for if his *Ignis* be Matter, (as it is allow'd to be) then Matter existing *in omni Loco, &c.* proves absolutely an universal *Plenum*, which, I dare say, Mr. *W.* can more easily disprove, than he can prove an *Element of Fire*. But I design, e'er long, to shew, that neither *Boerhaave*, nor any one else, has proved Fire to be an Element; but that it is easily proved by many-fold Experiments, to be producible by the mechanical Actions of Bodies upon each other; and therefore shall say no more of it here.

As the Electrical Matter flows from every Part (being disseminated thro' all the System) towards the excited Globe, or Tube, so those  
Bodies



Bodies which are densest, communicate the greatest Quantity. Hence that which is from the Air only, is too little to be sensible; but that which is from the Floor is in greater Quantity, and sufficient to produce the *Phænomena*. A Man, at the End of a long Tree, can't hear the Beats of a Watch at the other End by the Action of Air only, but thro' the Tree he hears it plainly; and thro' Iron he would hear it still plainer. So the Action of Fire is augmented by Bodies; and more by dense Bodies than by rare ones. I make no Doubt, but that if Experiments could be perform'd in a Room wainscoted, and floor'd with Iron instead of Wood, the Effects would be still much greater.

I THINK it is plain from *Phænomena*, that those Bodies whose Parts are of the most inflammable Nature, are saturated beyond others with this Electric Matter; and that it is detain'd in them by a very great attracting Power, by which Means they become unfit to transmit it; and such whose Parts are elastic, will, when excited by Friction, throw it out in great Plenty, and then it sets in from all other Parts and Bodies to restore the *Equilibrium*. This accounts for that which is call'd the *attracting Power of Electricity*. Then for the *repulsive Power*, it is evident by Experiment, that no light Body will be repell'd 'till it has first been impregnated with the Electric Matter; if this Matter remains in the Body (as in a Feather suspended



suspended by Silk) it is repell'd by any other Body electrify'd; otherwise not, as when the Silk is wetted. When this Matter by the Action of the Globe is put into Motion, and condensed to a sufficient Degree, it then begins to *shine*, or become *Flame*, and will in a small Degree burn; *and then, and not 'till then, it is properly call'd FIRE.* So that the *Newtonian Theory* is still worthy of its superior Author, and consistent with every Experiment and *Phænomenon* of Nature; and, I doubt not, will at last be universally received, when the Mists that have obscured it, shall be all dispell'd by the irresistible Beams and Radiance of culminating Truth.

*F I N I S.*



