

The Athenian Mercury:

Saturday, October 29. 1692. Licens'd, E. B.

Quest. 1. *Whether or no there's a Vacuum?*

What some few of our Members may have said of this Subject, whom we are satisfied retain a little too much of the *Peripatetick Philosophy*, we have not here leisure to examine; but we shall now give you what the more Modern Learned generally conclude upon at this time; There are many small Vacuities throughout the Universe, dispers'd amongst Bodies, and parts of Bodies. We must either admit this, or penetration of Bodies, or deny all Motion, none of which we can do; for suppose a Bottle contain'd a hundred thousand Atoms, and would receive no more, its certain that none of these Atoms could be mov'd without penetration, because there's no room for one Atom to give place to another. 'Tis the property of Bodies to resist Motion; if therefore the Universe was full of Atoms, or Bodies, it would resist Motion on every side, and throughout the whole. The most plausible thing that we find objected, is, That Water is a Continuous Body, close, and without any Vacuum interspersum; as also the Air is continuous, and yet Fish move in the first without leaving any Vacuum behind them, and Birds in the last with the same Effect. To this we Answer, That tho' it may appear so to the Eye, those particles of water closing so fast after the Fish, that they are not discernable, yet there's no dispute against the matter of Fact, which many Experiments, both as to Water and Air, do fully evince. Suppose then that in a Tube of Glass, hermetically seal'd, the Air be forc'd into the room of six Fingers breadth, and the particles of Air to be two Millions, which take up these six Fingers breadth of the Tube: Suppose also that the Air be farther compress'd in this Tube to three Fingers breadth, as its plain it may by the Action of Air Guns; either it will be, that two particles of Air fill'd up one space in the Tube, or else that one particle was in two spaces: the first can't be without penetration, nor the last without an Absurdity, therefore we must have recourse to a Vacuum, into which these particles were compress'd; if in Air, much more in Water, for the many Experiments that have been made in Freezing, assure us of a vast quantity of Air in Water, and consequently of Vacuum's, for if Air which is more subtle and thin, has Vacuum's in it, it follows doubly that Water may, because 'tis compos'd of grosser particles, and even contains that which contains Vacuums as above.

Quest. 2. *Being lately at a certain Town in Norfolk, where some Concerns carried me, I heard of a very strange, and to my Thoughts unnatural thing, a Woman miscarried of 7 Children: I being a little incredulous, enquired the truth of it, of a very judicious and understanding Person, that was present at her miscarriage; the Truth was affirm'd to me, and the Party will stand to it before you, Gentlemen, or any of the Colledge of Physicians. There were distinct Coats, &c. and Nature design'd so many Children: Now the Question is, Whether such Instances can be met with according to the Course of Nature, and what Solution you can give of 'em?*

Answer. That there are innumerable Instances in History of like Nature, no Body that has conversed a little in that part of it, but is satisfied of the Truth of it: Nor can we see so unnatural a thing in't as some persons are willing to believe; for if 'tis not so esteem'd in Twins, why in three Children, which is very frequent, and there are some Women that have never less than two or three? 'tis the unaccustomedness of things that surprizes more than the Nature of 'em. As for a more particular Discussion into the Nature of these things, it ought to have more of privacy, than this Paper is like to meet with, only in General Terms, we can assure the Querist, that a Humane Conception,

and its Consequences, whether double, treble, Quadruple, &c. have all the very same Natural Causes that a single one has, which as we said before, by reason of its frequency, wants the surprize of the other.

Quest. 3. *Being upon a Voyage to the West-Indies, in the Latitude of 28. Deg. I made an Experiment upon what I heard from an Old Saylor, which was this: I took a quart Glass Bottle empty, and drove a Cork into it as fast as I could, without breaking, and with a Lead and Line sunk it to the depth of 60 Fathom, then took it up again, when the Cork was drawn, or thrust into Bottle, and the Bottle full of water: Pray inform us of the Reason hereof?*

Answer. We should be glad if any one would make the same Experiment with the mouth of the Bottle downward; for if it has the same Effect, then (which we believe it may) it may possibly proceed from this Cause: That the vast quantity, or Columes of Water press the lower and deeper parts of the Sea so very much, that they lye a great deal in a little room; that is, their particles are compress'd so much, that there's very little Vacuum there, and by consequence its very Natural to press upon, and force into places that are less condense, as into the Bottle, which being full of free, loose Air, might be forc'd into many times a less room than at first, and therefore be easily work'd upon by a surrounding straitned Body.

Quest. 4. *It is observable, that in the little space of Europe there's a vast difference of the Air and Weather, some places almost intolerable with Cold, and others with Heat: Now since we are inform'd by Sailors, &c. that both the Torrid and the Frigid Zone are Inhabitable: I would know how its possible for those People to live?*

Answer. Custom no doubt may contribute much to the enduring such Extremities, which because continual, are not so to them; but Mankind, however differently dispers'd thro' the Earth, are too much a-kin not to be lost in those Extremities, were there not some other Natural Reason for the rendring 'em supportable. And first, As for those that live under the Frigid Zone, Providence has so order'd, that there's a great Company of Furrs, which are no little defence against the Cold; besides, those People live in Dens and Caves, and places made under ground on purpose to shelter them from the Assaults of the Weather. As to those that live under the Torrid Zone, there must necessarily be vast Exhalations thro' the heat of the Sun, which by reason of their Quantity, continually turn to Rain and Winds, and thereby extenuate the Heat, and make it more tolerable than is commonly imagin'd. Add to this, the cool breezes which come off the Sea every Evening, and continue all the Night, which is near 12 hours all the Year about; all which things considered, may take away the suppos'd Wonder in the Question, and perhaps give the Querist the satisfaction he wanted.

Quest. 5. *What is the reason of ascending and descending of Bodies, or what is the Gravity or Levity of Bodies?*

Answer. It's a very easie thing to render these Difficulties greater than we find 'em, by talking of 'em after the usual manner; however, by comparing of Opinions together, and weighing their Reasons, we shall at least be certain of thus much, that we shan't know less of the matter, than those that have gone before us; there are amongst the rest three Opinions, that have every one of 'em had some deference amongst the Learned World, viz. the *Peripateticks*, the *Epicureans*, and our more Modern Philosophers: The first lose themselves in Occult Qualities, the second in Atoms, the last deny any Gravity or Levity at all naturally inherent in Bodies: So that if a Stone moves downward, or the Flame upward, 'tis from some External Violence which

which forces them to do so; and indeed the reason appears very plain, that 'tis some external Violence upon Bodies that has this strange Effect; For whatever things are naturally inherent in or essential to a Body, are always so; but Stones may be cast upwards, and the Flame beat downwards, and neither of 'em lose their essential properties. And if God should annihilate all the World but one Stone, and the Flame of one Candle, the Stone would not move downward, nor the Flame upward, but both of 'em would rest naturally. Again, a Natural Motion is equal, and always the same, but we find the Motion of Bodies different, and void of the Equability necessary to every thing that's Natural, for a Stone in its fall moves faster towards the last than at first. Besides, Bodies have in themselves the passive Principle of Motion and Rest: We mean, they have in themselves that quality that they may receive Motion, or rest by something external, therefore as to their own Nature they are indifferent whether they move or not, and from this indifference of Bodies we justly infer, that every thing would eternally remain in that State it now is, (as to itself) were it not from some External Violence: As also whatever is put in Motion would eternally move with the same Equability as at first, if there were no other external Bodies to retard and resist its motion. Hence also by the by we need not wonder that the Heavenly Orbs leave not moving, which are so far above every thing that may resist their Motion, which was at first communicated to them by the God of Nature.

But after all the Question recurs, that since there is no Natural Gravity or Levity in Bodies, why do some ascend and others descend? With submission to so many great Men as are now of a contrary Opinion, we can't see how it's possible that the Pressure of the Atmosphere should make Bodies descend towards the Earth, for then we should have no Bodies ascend: Besides, we would further desire of those Gentlemen to inform us what it is that presses down the Atmosphere, or puts the Atmosphere in a descending motion, for of it self it has no such Natural Quality, nor any other Body whatever, as we have proved above, we see more reason after all to recur to the Magnetism of the Earth, and by that we can easier solve both the Descent and Bodies. That the Earth is a great *Magnet* is plain, since it is also capable of Communicating that Quality to Bodies capable of it, as Iron, for Experience shows that a piece of Iron standing any considerable time erect, as in Windows, Doors, &c. does grow magnetick and Polar in the lower end: What the Earth's Effluvioms are, or how they take their Circuit, and bring Bodies back again with 'em, is as hard as to solve the like Quality in the Load-stone. But admitting such an Hypothesis as the Attraction of the Earth, the Ascent and Descent of Bodies may have this probable Solution, that those Bodies which are most gross are the easiest to be laid hold on by the return of these Effluvioms, when those that are more subtle and fine divide and make way for 'em. If it be askt why these Effluvioms don't at their first going out of the Earth take up gross Bodies with 'em, and carry a Man and his Horse up into the Clouds, as well as bring one down from the top of a Tower or Steeple? We Answer, That these Effluvioms are extream subtle and fine at their first going out of the Earth, and therefore make their way through the Porous Parts of Bodies. As for the Ascent of Bodies it must necessarily be granted, unless we admitted Penetration, for the Face of the Earth being full crouded with Bodies, some more gross, and others more subtle and fine, it follows that when the grosser Bodies subside by Virtue of the Effluvioms, they juggle those which are more subtle out of their places, which therefore are forced to mount upwards for more room, as the mixture of several Ingredients of Liquids in a Glass Viol shows, which being all shaken together, the grosser subside, and those we call the lighter are thrust upwards; for they cant ly all together in the Bottom, without Penetration, as we said before.

Quest. 6. One J. W. of C. in the County of Essex cohabited with a Woman in C. 9 or 10 Years, his supposed Wife; they Traded together with the same Interest as Man and Wife for so many Tears, he has by her 2 Children; but now lately

upon a Curtain-quarrel between them, the Man leaves her, declares he was never married to her, and in a very few dayes after he really marries a Widdow in the same Town: Quest. Which is his Wife in the sight of God?

Ans. Cohabitation has formerly upon Trials been admitted sufficient to bind the Parties as Man and Wife, the Cohabitation being the publick Consummating of the Promises that interchanged privately betwixt them which would prevent many such Practises, were it confirmed. They in Conscience were Man and Wife, only for want of the Civil Obligation of Matrimony, Children cannot legally inherit, and the Woman consenting has no Damage in the Law: He is liable to Pennance, and must secure the Parish from the Charge of the Woman and Children, and provide for the Children. Were it not for the Law, such a Man's Conscience would boggle at no Villany, and so he ought to be looked upon as such.

Quest. 7. There is a Town called Gardley Gobion in the Parish of Potters purry in Northampton-shire, near Stony-Stratford, where the Inhabitants report, there formerly lived one Earl Gobion: Now the Party desires to know whether there ever liv'd any such Man there, and in what King's Reign?

Ans. If the Gentleman please to be at the usual Fees to search that Ancient Book called *Dooms-day Book*, wherein are reserved the Original of most Names and Places in England. No doubt but he may be satisfied in this Earl's Name, if he ever was, altho' the Name now may be somewhat different from the Original.

Quest. 8. There is in the aforesaid County of Northampton in several places a Weed growing which they call Dane Weed, which smells like Alder, and is reported to spring from the Blood of the Danes: Now the Party desires to know whether it does really spring from the Blood of the Danes, or grow naturally as other Plants do?

Ans. A great slaughter of the Danes made in a weedy place, or those Weeds most appeared after the slaughter, might occasion the imposing that Name upon the Weed.

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L O N D O N, Printed for John Dunton at the Raven in the Poultry, 1692.